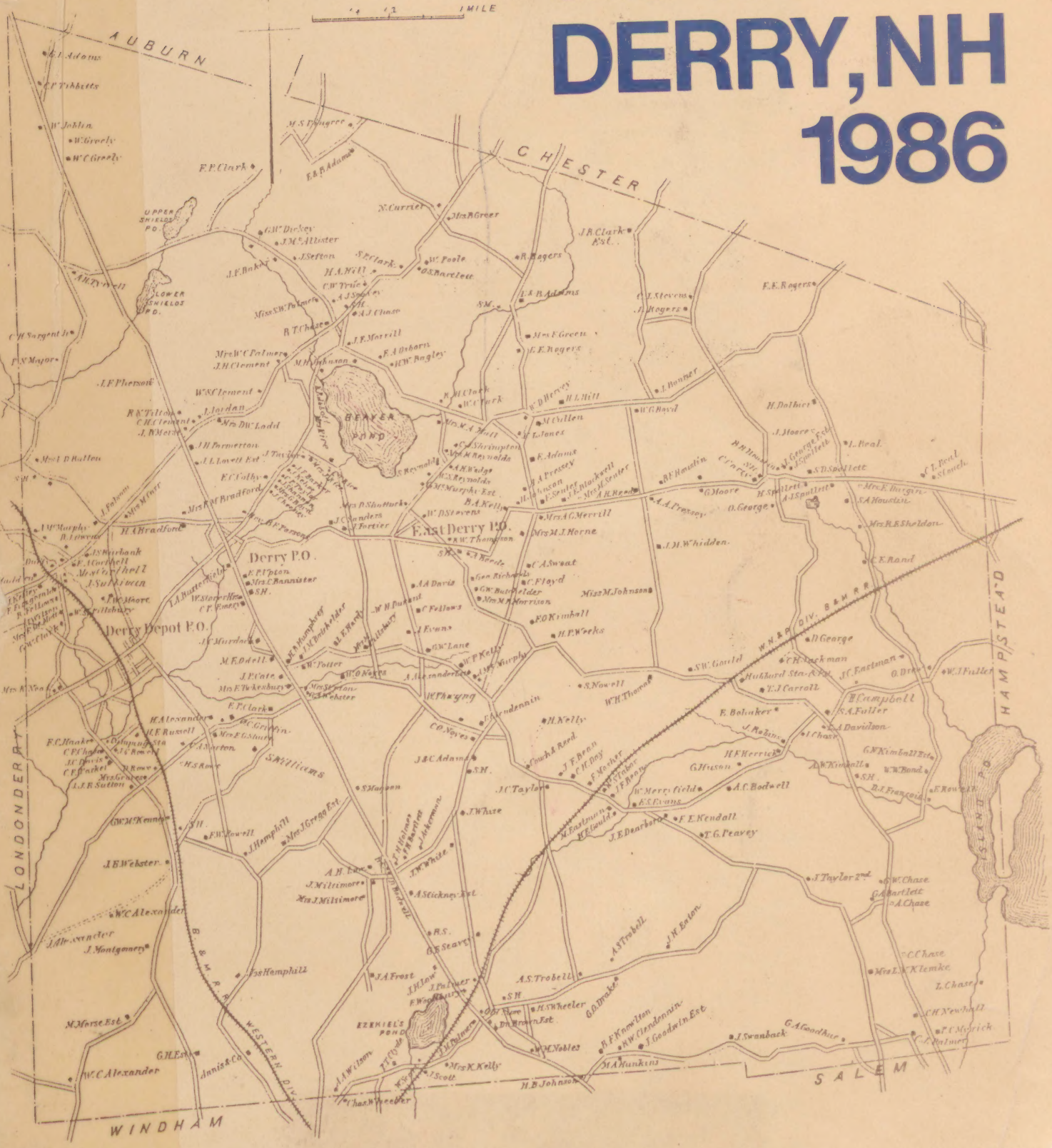
MASTER PLAN for the town of DERRY, NH 1986



HANS KLUNDER ASSOCIATES - HANOVER, NH 0375

January 1987

MASTER PLAN

for the

TOWN OF DERRY, NEW HAMPSHIRE

1986

Prepared and Presented by:
Hans Klunder Associates
Hanover, NH 03755

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INTRODUCTION

This Master Plan document is prepared for the Town of Derry and includes statements pertaining to land use and development proposals illustrated with maps, diagrams, and charts. It is designed to serve and guide the Planning Board in its assigned responsibilities and is prepared in compliance with Chapter 674:2 of the New Hampshire Planning and Land Use Regulation Laws, 1985 Edition.

The Plan includes goals and objectives to be obtained through the planning effort with consideration given to the following: land use and community land resources; socio-economics; housing needs; the transportation network; utility and service areas; proposed community facilities, and open space, recreation, and conservation areas. The appendix includes results of the Citizens Survey.

The Planning Board was greatly assisted with Master Plan efforts by the Citizens Committee, charged with the responsibility of coordinating the various subcommittees involved, and by the members of 1,500 households who took the time to respond to the Questionnaire Survey.

Today, Derry is a community at the fringe of the Boston Metropolitan area of influence. It is part of the Southern New Hampshire growth triangle and has been experiencing as much growth, if not more than, adjacent communities. Many of the problems related to town growth were indirectly the result of Derry's role in its larger regional setting. The Community Goals Committee and Derry residents believe that two key points of the Plan are: 1) to preserve and enhance elements that have made Derry attractive, and 2) to overcome problems which might be adverse to the goal of retaining the quality of life as it exists in Derry today. The Master Plan sets forth areas of potential development, preservation of its natural resources, thereby providing for population growth, diversification in land use, and the opportunity for an orderly development to complement the Town's past and present role.

While much of the Plan is concerned with the 11,323 acres that are still undeveloped, the re-use of public and private land resources, particularly in the central area, is also addressed. A key element in this Master Plan is the proposed Land Use Plan which will serve as a basis for the new zoning ordinance. The Land Use Plan is structured on an inventory analysis from existing land use patterns, the soils and their capabilities in accommodating development, the community's topography, and general building and environmental conditions.

Also reflected in the Plan are transportation and community facility considerations, the availability of utilities, and the need for new services based on economic opportunities and population growth projections. It is the Land Use Plan that is the key in providing for an orderly future development.

Derry's role has changed since the formulation of its 1965 Master Plan, when the shoe industry was still the community's primary economic resource. Today, Derry's largest significant resource is its land area. This

community asset is in need of protection under public covenant, in order to allow for continued public health, safety, and welfare in a community which is undergoing rapid change. In addition to making provisions that accommodate housing growth and meet the demands resulting from economic growth, this Master Plan sets forth recommendations for development of recreation, conservation and open space areas, and identifies areas and resources that are important to be preserved as natural areas.

A new traffic circulation plan sets forth recommended street and highway classifications, allowing for an orderly circulation pattern that will, over a period of 10-20 years, improve convenience of travel and enhance the safety of highway travelers.

This comprehensive Master Plan serves as a basis for present and future implementation. The Town Council has authorized the preparation of a new zoning ordinance, Capital Improvement Program, Capital Budget for financial implementation of the Plan, review and revisions of the Town's site plan regulations, subdivision regulations and other appropriate implementation measures to provide for the orderly development of Derry. These measures have been authorized to ensure that the Master Plan will be used as an important tool in the future growth and change of the community.

This Master Plan includes, among other discussions, the following statutory requirements:

I. A general statement which shall include such topics as the objectives, principles, assumptions, policies and standards upon which the constituent proposals for the physical and socio-economic development of the municipality are based.

II. A land use section which takes into account natural conditions and which shows the existing conditions and the proposed location, extent, and intensity of future land usage.

III. A housing section which analyzes existing housing resources and addresses future housing needs.

IV. A transportation section showing the location and types of facilities for all modes of transportation required for the efficient movement of people and goods into, about, and through the municipality.

V. A utility and public service section analyzing the need for and showing the present and future general location of existing and anticipated public and private utilities, their supplies and distribution and storage facilities.

VI. A community facilities section showing the location of, type, and need for educational or cultural facilities, historic sites, libraries, hospitals, fire houses, police stations and other related facilities, including their relation to the surrounding areas.

VII. A recreation section which shows existing recreation facilities and which addresses future recreation needs.

VIII. A conservation and preservation section which may provide for the preservation, conservation, and use of natural and man-made resources.

IX. Appendices or separate reports where appropriate which contain the underlying scientific and statistical data for the master plan and its constituent elements.

TOWN OF DERRY, N.H.
Planning Board

October, 1986

Dear Residents of Derry,

As a result of the authorization by Town Meeting in 1984-1985, the Planning Board has developed a comprehensive Master Plan that is designed to chart the course for our town's growth. The projections in this plan are the foreseeable future and envision changes through the year 2000. In preparation of this Master Plan study, the Board was assisted by its professional consultant, Hans Klunder of Hans Klunder Associates, Hanover, NH.

The Plan inventories our man-made and natural resources, which were analyzed and studied as part of the planning effort. While information was being gathered, many of us participated by filling out the Citizens Questionnaire Survey and furnishing important input. With these studies at hand, the planners proceeded to formulate recommendations. Finally, guidelines and proposals for future growth and improvement were developed by the Board and are contained in this Master Plan.

We hope that you will study this document, and give us your continued thoughts, input and support when the time comes for necessary implementation measures before the Town Council. The following pages are but the Master Plan, and as such are designed to guide our future development. If we are to protect and preserve our community in light of continuing growth and change, such orderly development must be in accordance with the Plan, as well as the Town's bylaws and regulations. The Planning Board will submit such measures to the Mayor and Town Council for their consideration and action.

I have enjoyed working on this important part of our community's progress, and I wish to thank everyone for the support they have given in our planning efforts.

Sincerely yours,

Robert Cole

Robert Cole
Chairman

1985
TOWN OFFICERS

Board of Selectmen

Edward Anderson, Chairman
H. Robert Kling — Janet Conroy — Richard Buckley
May Casten

Administrative Secretary
(to Board of Selectmen)
Sandra Newton

Receptionist
Carolyn Blasi

Town Treasurer
David Buffum

Tax Collector
JoAnne Maurice
Brenda Sullivan, Deputy — Mary Sheridan, Clerk

Town Clerk
Cecile Hoisington
Deborah Smith, Deputy — Marjorie Swanson, Clerk

MacGregor Library Trustees

1985	1986	1987
Francis Mannarini	John D. Cadieux	Thomas Bissett
Richard Emery		Walter A. Pillsbury
Marsha Hepworth Koch		

Taylor Library Trustees

1985	1986	1987
Marjorie Allen	Arthur Bryant	Priscilla Johnson
Sharon Butterfield	Janet Crawford	Mary Garvey

Planning Board

Robert Cole, Chairman — Kathryn Aranda — Cecile Cormier, Secretary
Carmello Napoli — Robert Newell — Hugh T. Lee

Selectman's Representative
Edward Anderson

Alternates
Deborah Nutter — Geraldine Bangs — David Doran

Town Counsel
Louie Soule

Derry District Court
Judge Lawrence Warhall
Associate Judge Joseph Stancik

Master Plan Committee/Subcommittees

Geraldine Bangs
Jim Rogers, Chairman

Growth Management Subcommittee

Cecile M. Cormier, Chairman
Mary Holland
Jim Rogers
Betsy Daniels
Eileen Hargreaves
Mary Ann Edman
Barbara Gornell
Carolyn Dixon
Tom Keefe
Ken Gould

Housing SubCommittee

Geraldine Bangs
John Brown
Harriett Durward
Mike Myers
Ken Weyant
Mary Ann Edman
Lynn Schmitt
John Hawthorne
Edwin Simonsen
Anna Marie Foote
Arthur Caras
George Miley
Mary Smith
Barbara Yelland

Cultural SubCommittee

Caryl Carle
Nancy Murdock
Richard Carle
Eileen Kandel
Cynthia Petry

Historical District SubCommittee

Ralph Bonner and Don Houston, CoChairmen
Francine Nicholson
Grant Davis
Marion Houston

Historical Planning Consultant

Lynne Emerson Monroe

Recreation SubCommittee

Emilio Marianelli, Chairman
Barbara Gornell
Mary Ann Edman

Commercial SubCommittee

May Casten, Chairman
Brenda Keith

ACKNOWLEDGMENTS
for
Questionnaire Survey SubCommittee

Carol Guerrin
Eileen Hargreaves
Mary Holland
Ed Cooper
Deborah Nutter
Barbara Gornell
David Rogh
Mary Ann Edman
Carolyn Dixon
Harriet Durward
David A. Reid

1986
TOWN OFFICERS

Mayor

Paul Collette

Town Council

Richard Buckley
Michael Compos
Scott Gerrish
Frederick A. Tompkins
Maurice Desforge
Phyllis Katsakiores

Planning Board

Robert Cole, Chairman
Paul Collette, Mayor
Cecile Cormier, Secretary
James Cote, Administrative Member
Robert Newell
Kathryn Aranda
Hugh T. Lee
Carmello Napoli
Frederick A. Tompkins

Planning Board Alternates

Deborah Nutter
Mike Compos, Council Member
Warrington Willis
Mary Ann Edman

Community Goals SubCommittee

Fred Piper
Dave Brown
Conrad Quimby
James Lannon
Maurice Desforge
Grant Benson, Jr.
Ralph Bonner
Don Irwin
Ron Turner
Edward Cooper
Richard Carle

Town Administrator

Craig W. Bulkley

Director of Public Works

Rodney A. Bartlett

Building Inspector

Fred L. Piper

Town Planner

George Sioras

SECTION I GOALS AND POLICIES

1986-2000

COMMUNITY GOAL 1: Plan and Coordinate Community Development.

Recommended Policies:

1. Adopt a Master Plan by the Planning Board that is designed to give direction to the community for the balance of this century.
2. Adopt ordinances and measures, including a Capital Improvement Program by the legislative body, that will implement the Town's Master Plan recommendations.
3. Focus on development so as to enhance the living and employment environment in the Town of Derry.
4. Provide in the Planning Board schedule for periodic review and citizen input in the Master Plan's realization.

COMMUNITY GOAL 2: Retain a 'Small-Town' Character for Derry.

Recommended Policies:

1. Cultivate, through private and public efforts, a sense of community and belonging.
2. Promote citizen participation in the community's growth and change.
3. Develop a Master Plan that identifies neighborhoods and their focal points to emphasize community and neighborhood groups.
4. Provide proper planning and implementation measures that are designed for the preservation of the scenic qualities and historic buildings and landmarks in the Town of Derry.

5. Support the Historic District Commission's efforts for historic preservation.

6. Seek State participation in acquisition of development rights on farmlands.

7. Establish a scenic road classification and protection measures for such roads in the Town.

COMMUNITY GOAL 3:

Provide for a Prosperous, Diversified Economic Base.

Recommended Policies:

1. Enhance present community assets, such as the downtown area and the Industrial Park.

2. Establish an Economic Development Department.

3. Promote and coordinate economic development efforts.

COMMUNITY GOAL 4:

Develop a Master Plan that Achieves a Balance Between the Natural and Man-Made Environment.

Recommended Policies:

1. Develop, with the Master Plan, a program that allows growth and change to take place in harmony with Derry's natural and historical resources.

2. Develop an open space program with plans that can be implemented through various means of acquisition of development rights. This would include outright purchase, dedication of easements, dedication of development rights, acquisition of development rights, and the incorporation of open space reserves.

COMMUNITY GOAL 5:

Provide, through the Master Plan, for recreational and educational opportunities for all ages.

Recommended Policies:

1. Formulate plans and capital funding schedules to meet the educational, recreational and park needs of the community now and in the future.
2. Coordinate the use of school and town recreational facilities, where appropriate.
3. Seek to assure the continuation of the high quality of education provided in Derry.

COMMUNITY GOAL 6:

Create a Balance of Diversified Housing.

Recommended Policies:

1. Provide for a plan that will create opportunities for all social and economic levels of society to obtain balanced and diversified housing.

COMMUNITY GOAL 7: Encourage programs that:

- Provide for good schools, open space, and good roads.
- Create an atmosphere of cooperation between the private sector and the community by rendering appropriate services supported by public policies and actions.

Recommended Policies:

1. Develop a Capital Improvement Program/Budget that will assure the availability of funds to support all levels of governmental services and needs throughout the balance of this century.

2. Encourage Town Administrators and Planners to provide a program and services that responsibly deal with the service needs resulting from the Town's increased growth.

COMMUNITY GOAL 8:

Create a Regional Setting for Community Plan Realization.

Recommended Policies:

1. Borrow on regional and state resources that may be available to the Town of Derry.
2. Share and cooperate with neighboring communities in the development of regional facilities.
3. Resolve common problems predicated on the convenience and cost advantage of the residents of Derry and the surrounding communities. (These would include programs such as solid waste disposal, sewage, water, roads, and recreation.)

COMMUNITY GOAL 9:

Provide for Safe, Convenient Travel in the Town of Derry.

Recommended Policies:

1. Develop a Plan that classifies roads designed to serve the traffic needs of the community.
2. Provide for an orderly priority program to improve the road network for the attainment of this goal.
3. Develop a road network that is designed to serve the transportation needs of Derry.
4. Encourage intercommunity efforts to seek State support for highway improvement programs.

COMMUNITY GOAL 10:

Support and Revitalize Downtown Derry.

Recommended Policies:

1. Encourage public and private efforts to revitalize downtown Derry.
2. Encourage the development of architecturally compatible themes.
3. Identify and preserve historically significant buildings and sites as part of the downtown revitalization effort.

The foregoing statement is respectfully submitted for the Planning Board's consideration by the Community Goals Committee.

Maurice Desforge

Donald Irwin

Dave Brown

Pastor Ronald Turner

Grant Benson

Conrad Quimby

Ralph Bonner

Richard Carle

Edward Cooper

Jim Lannan

SECTION II A. EXISTING LAND USE

The Town of Derry's most significant resource is its land area of 35.6 square miles (or 22,784 acres). Use of this land is subject to community decision which, in turn, is influenced by regional and state impacts. These decisions are a key element to community growth and change.

Derry has evolved from a manufacturing community accessible by railroad to a residential/suburban type of location. Much of Derry's consumption of land areas has been influenced by regional (not local) employment opportunities.

The development pattern in the last twenty-five years has been one accommodating the housing market, with Derry residents commuting to larger regions, as far as forty-five miles distant. Before Derry can decide on measures to protect its resources and provide for development, it is essential to identify the present use of land areas, what should be protected, what could be developed, and to what density.

1. Residential Land Use

Of the 5,210 residential acres consumed today, approximately 4,726 acres contain single family year-round homes with few seasonal residents. Two-family residential homes consume approximately 381 acres while multi-family housing consumes 103 acres.

Derry's single family home development has taken place throughout the entire community, with developments taking place near the Hampstead line, near the Auburn line, the Chester line, near Salem, near Windham, and in East Derry--in short, anywhere there appears to be a plot of land for sale that is suitable for development. This appears to be an expensive way to grow, both financially and environmentally. Housing seems to be accommodated at the expense of the community's resources, its land, transportation, utilities, and last but not least, orderly development.

2. Commercial Land Use

While residential uses have grown five-fold since 1965, commercial land use has merely doubled to 185 acres. Commercial use generally supports residential growth for the local market supply as well as the larger regional market. Derry has fallen short in having commercial growth commensurate with residential growth.

3. Industrial Land Use

Industrial development has increased to a current use of 111 acres. That is less than a 20% increase since 1965 and has not kept pace with the vast growth in residential land use. Since it is a measure of employment opportunities available locally, Derry's residents have had to rely on jobs elsewhere which is not considered a sound development pattern.

4. Public Land Use

In 1965, 323 acres were devoted to public use. Today Derry has under its auspices the use of 510 acres, some of which were acquired through the Conservation Commission. This is far short of the established goal of 1,270 acres set 20 years ago in the 1965 Master Plan.

5. Semi-Public Land Use

Semi-public land use, for cemeteries, churches, Pinkerton Academy, the Boys Club, etc., involved 152 acres in 1965 and today has expanded to 385 acres. What is significant is that these 385 acres are essentially tax-exempt properties. However, the Town does not gain any tax revenue or income from these properties through forest yield practices, land management efforts, or other public use.

6. Rights-of-Way Land Use

There are 1,256 acres devoted to rights-of-way for utilities, roads, and former railroads. Of these, approximately 322 acres are power line rights-of-way, while roads, highways, and former railroad rights-of-way consume the other 934 acres.

7. Flood Plains and Wetlands

Flood plains are identified in accordance with the Department of Housing and Urban Development ("HUD") Insurance Management Program's designation of these areas. These land areas should be protected from development. In Derry this land area measures 2,801 acres.

Similarly, wetlands consume 1,127 acres in the Town of Derry and, combined with flood plains and flood ways, total over 3,900 acres that should be undisturbed by human settlement. Neither should these areas be filled in or otherwise taken out of the natural resources inventory for the community.

8. Forest and Open Space Land Use

There are 1,691 acres of open land areas identified from aerial photographs as fields, pasture lands, orchards, etc.; and there are 9,122 acres of forest land. Together, this totals 10,813 acres in the Town of Derry left for developmental purposes. Some of this acreage includes farmlands and second growth forests.

9. Water Area

The water area in Derry equals 386 acres. This has not changed since earlier studies done in 1965.

Summary

Derry today is using 7,657 acres for development purposes. This includes rights-of-way, public lands, commercial/industrial, residential and semi-public land. In addition, 3,928 acres are identified as flood plain and wetland areas; and 386 acres, as water areas. This amounts to a total of 4,314 acres of 'unuseable' land area. The grand total of land acreage not readily useable for development comes to 11,971 acres, of which 810 acres are proposed for public purposes.

Comparing 1965, when approximately 20,437 acres were vacant, with 1985, when 15,128 acres were vacant, the Town has consumed its land area at an average of 265 acres per year. Were this trend to continue, Derry's land area would be consumed in approximately thirty-five years, assuming the present rate of growth. Considering that thirty-five years is approximately one generation, Derry today must plan how best to utilize its land areas. This means identifying those areas that should not be developed, identifying those areas that should have high priority for development, identifying those areas that should be low priority for development and, identifying the densities of development which should prevail in each of these areas.

TABLE I

LAND USE IN DERRY

1985 (Approximate Acreages)

Residential:	
4,726 Acres - Single Family (incl. Seasonal)	
381 Acres - 2 Family	
103 Acres - Multi-Family	5,210 A.
Commercial	185 A.
Industrial	111 A.
Public	510 A.
Semi-Public	385 A.
Rights-of-Way:	
322 Acres - Utilities	
934 Acres - Roads/Highways	1,256 A.
Flood Plain	2,801 A.
Wetlands	1,127 A.
Open (Fields, Pastures, Orchards)	1,691 A.
Water	386 A.
Forest Land	9,122 A.
TOTAL	22,784 A.

Source: 1984 Aerial Photography, 1985 Field Survey.

TABLE 2

COMPARISON OF LAND USE DATA, 1965, 1975, 1985

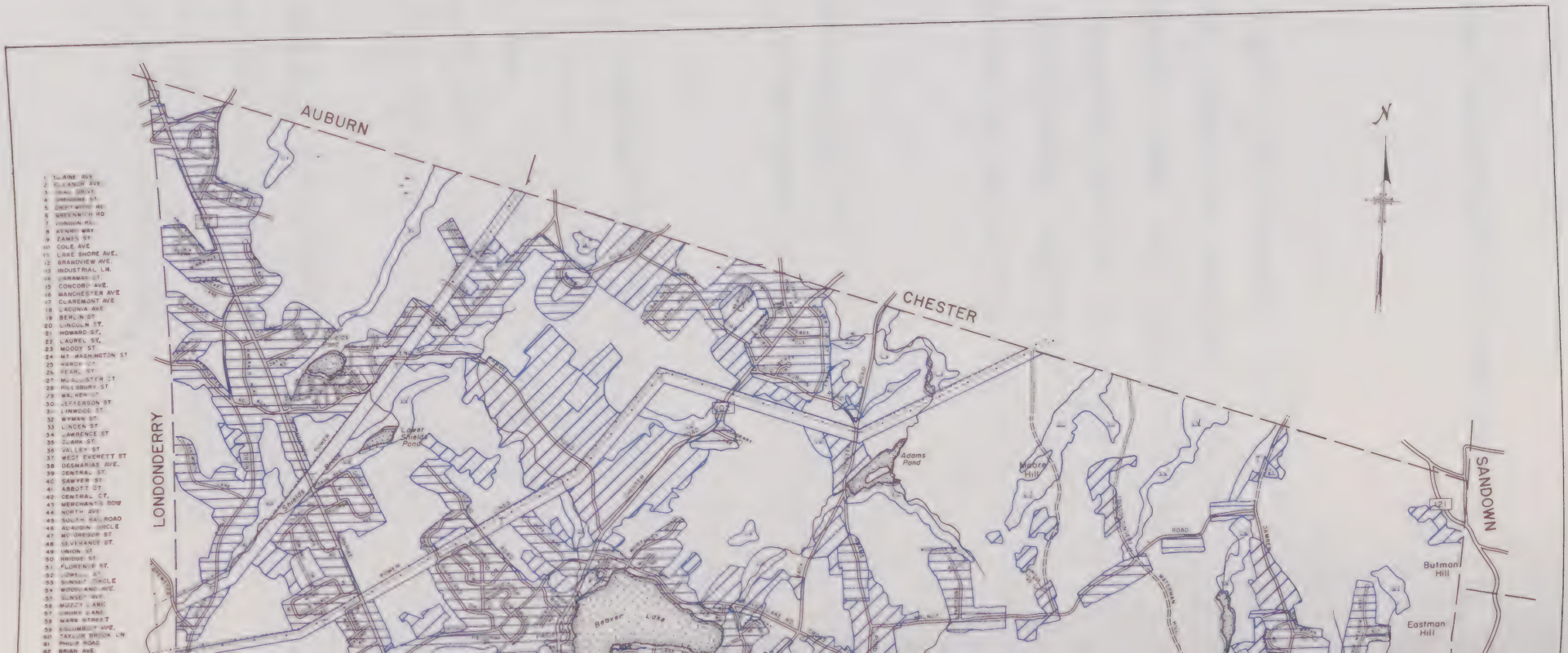
Land Use Category	1965 Data Acres	1965 Data % Tot.	1975 Data Acres	1975 Data % Tot.	1985 Data Acres	1985 Data % Tot.
Residential (all)	925	4.1	3,540	15.54	5,210	22.9
Commercial	95	0.4	142	.62	185	.8
Industrial	92	0.4	96	.42	111	.5
Public	323	1.4	340	1.49	510	2.2
Semi-Public	152	0.7	1,200*	5.27	385	1.7
Utilities & Streets	760	3.3	938	4.12	1,256	5.5
Vacant	20,437	89.7	16,528	72.54	15,127	66.4
TOTALS	22,784	100.0	22,784	100.00	22,784	100.0

*This figure is taken from the 1975 Town Plan, and appears questionable.

TABLE 3

PRESENT ZONING DISTRICT ACREAGES

Industrial	897 Acres
Retail Business	581 Acres
Multi-Residential	379 Acres
Mobile Homes	32 Acres
Residential	20,895 Acres
TOTAL	22,784 Acres


AUBURN
CHESTER
LONDONDERRY
SANDOWN
N
1 ELAINE AVE.
2 ELEANOR AVE.
3 CRAIG DRIVE
4 SHERIDAN ST.
5 DEPOT WORK RD.
6 GREENWICH RD
7 JOHNSON RD.
8 KENDRY WAY
9 ZAMES ST
10 COLE AVE.
11 LAKE SHORE AVE.
12 GRANDVIEW AVE.
13 INDUSTRIAL LN.
14 CARAMAN ST.
15 CONCORD AVE.
16 MANCHESTER AVE
17 CLAREMONT AVE
18 LACONIA AVE
19 BERLIN ST
20 LINCOLN ST.
21 HOWARD ST.
22 LAUREL ST.
23 MOODY ST.
24 MT. WASHINGTON ST
25 HANCOCK ST
26 PEARL ST.
27 McALLISTER ST
28 PILLSBURY ST
29 WALKER ST
30 JEFFERSON ST
31 LINWOOD ST.
32 WYMAN ST.
33 LINDEN ST
34 LAWRENCE ST
35 CLARK ST.
36 VALLEY ST
37 WEST EVERETT ST
38 DESMARAIS AVE.
39 CENTRAL ST.
40 SAWYER ST
41 ABBOTT ST
42 CENTRAL CT.
43 MERCHANTS ROW
44 NORTH AVE
45 SOUTH RAILROAD
46 ALADDIN CIRCLE
47 McGREGOR ST
48 SEVERANCE ST.
49 UNION ST
50 BRIDGE ST
51 FLORENCE ST.
52 LOWELL ST.
53 SUNNY CIRCLE
54 WOODLAND AVE.
55 SUNSET AVE.
56 MUZZY LANE
57 LAURA LANE
58 MAIN STREET
59 COLUMBUS AVE.
60 TAYLOR BROOK LN
61 PHILIP ROAD
62 BRIAN AVE.
Lower Shields Pond
Adams Pond
Moore Hill
Beaver Lake
Butman Hill
Eastman Hill
ROAD

EXISTING LAND USE

- Built Up
- Open and Agriculture
- Transport
- Forest
- Wetland
- Water

100 ACRES
25 ACRES
1 ACRE

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

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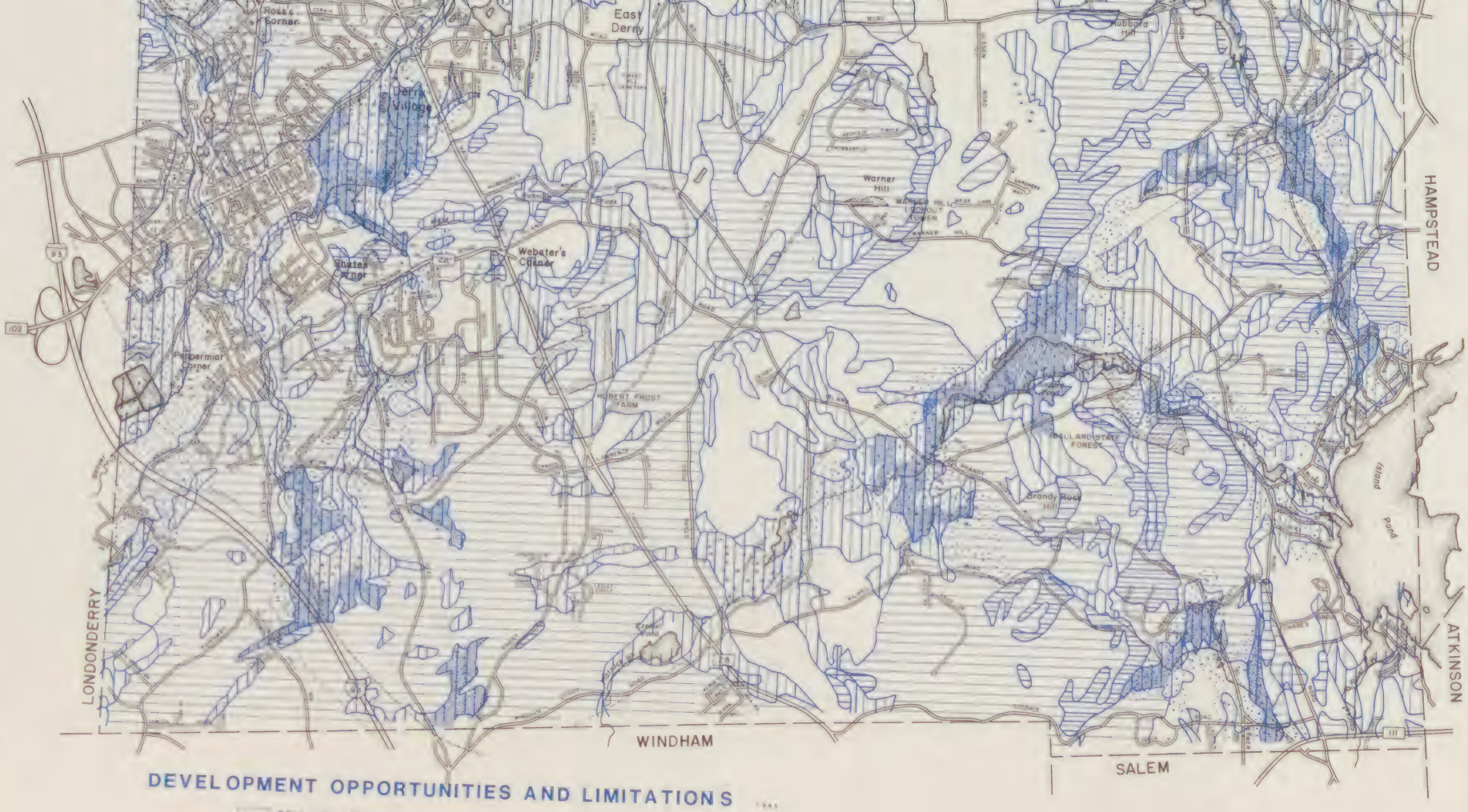


DEVELOPMENT OPPORTUNITIES AND LIMITATIONS

- FEW LIMITATIONS
- MODERATE LIMITATIONS - GROUNDWATER RECHARGE AREAS
- MODERATE LIMITATIONS - WET SOILS
- MODERATE TO SEVERE LIMITATIONS - DEPTH TO BEDROCK
- MODERATE TO SEVERE LIMITATIONS - SLOPE
- SEVERE LIMITATIONS - WET SOILS
- VERY SEVERE LIMITATIONS - FLOOD PLAINS AND WETLANDS
- DESIGNATED PRIME WETLAND (Prep. 1986)

50 ACRES
25 ACRES
1 ACRE

Data Sources: USDA Soil Conservation Service; USGS Topographic Maps; USGS Groundwater Availability Map

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

FEET 5000 2000 1000 0 1/4 1/2 3/4 1 MILE

C. PROPOSED LAND USE

Introduction

The land use plan for the Town of Derry is a policy, stated in text and map, for the future use of the land resources in the community. It serves as a guide for the Planning Board and public officials, as well as private citizens, in their efforts to determine the Town's future. Once adopted by the Planning Board, the land use plan forms the basis for a revised zoning ordinance. It is the zoning ordinance which should be the tool, under New Hampshire Enabling Legislation, that assures future orderly development in Derry.

The land use plan makes provision for protecting open land (land not to be developed). It shows generalized sites to be acquired and placed under public domain for public purposes. Therefore, the land use plan is a more generalized statement, with map, that reflects the Planning Board's recommendations to the Town Council through inclusion in the Master Plan. These recommendations ultimately serve as a basis for Town legislation to protect the community's land resources and to provide for orderly development.

The existing land use and present infrastructure provided by the community and private development were considered and projected into the future for most appropriate use of the community's land resources. In addition, the land use plan reflects Derry's ability to provide services for its residents and businesses, now and in the foreseeable future. The land use plan has incorporated water and sewer areas now being serviced and taken into consideration those areas where continued improvements in the near future will

The residential portion of the land use plan shows reasonable population projections to allow for an increase of 15,000 by the year 2000.

The land use plan proposal clearly sets forth the concept that "Not all land is equally suitable for development." Therefore, areas have been identified for early development, and others, for delayed development. Both will allow the community to provide services necessary to enjoy the amenities of "small-town" living. Therefore, until such time as the community is able to improve its transportation network, increase its community services, provide for adequate municipal facilities, i.e., recreation, town offices and educational facilities, this land use plan curtails overdevelopment in the outlying portions of the Town of Derry.

The Planning Board should continuously review the plan, make any appropriate changes it deems necessary in light of community conditions, rather than politics. This plan and any updates must set forth, in essence, the most appropriate use of land, keeping orderly development foremost in mind, and subject to future review and update in light of man-made changes both within the community and outside.

The proposed land use categories are identified on the following pages and on the map entitled "Proposed Land Uses".

1. Rural Residential Uses

The Town designates those areas remote from community services as "Rural Residential". It is these areas that, in the past, have been relatively undeveloped, inaccessible to municipal services (sewer, water), remote from education facilities, fire protection, police protection and poorly serviced by Derry's transportation network. The rural residential areas are recommended for delayed development at a density no greater than 1 dwelling unit per 3 acres.

In addition to being areas remote from municipal services, the Rural Residential areas are generally less suitable for higher density and residential development for reasons of topography and subsoil conditions and have been set aside as those areas most rural and forested in Derry today.

2. Low Density Residential Uses

While closer to community services than the rural designated areas, but still remote, the low density residential areas do not readily lend themselves to a density beyond 2.0 acres per dwelling unit where there is "on-lot" sewer and water services and slightly higher density where there is "off-lot" sewer and/or water services. It is an area that is more accessible to main roads; has slightly better access to community services, education, police protection; and, based on natural environmental conditions (soils, subsoils, etc.), is more suitable for earlier development than Rural Residential areas.

3. Medium Density Residential Uses

A 1.5 acre per dwelling unit area designation for medium density residential use is established. These are areas that surround those portions of the community now serviced with municipal services of sewer and water and are still sufficiently remote from the urban area. A higher density residential is discouraged here, while a density commensurate with municipal ability to provide services is established. A transportation network that provides an orderly flow of traffic will bring in line one needed municipal service through a highway program that meets present demands.

4. High Density Residential Uses

Recognizing the continued need for residential growth, there is a high-density residential area established surrounding Derry's urban core. These areas are readily accessible to community services, such as recreation, education, state highways, shopping, and employment opportunities.

In these areas 15,000 square feet are required per dwelling unit in order to allow for the orderly development of this urban-fringe area and its necessary community facilities.

5. Neighborhood Commercial Uses

Commercial services generally associated with the needs of the neighborhood are provided in the "Neighborhood Commercial" areas. These districts are located strategically throughout the community and should be designed in a manner providing convenient shopping opportunities for residents of segments of the community and visitors. The districts are designed to promote the present residential functioning of the neighborhood, retain its character and yet, provide a shopping environment needed for the convenience of residents in the locale.

It is recommended that neighborhood stores and services be limited in size to no more than 2,000 square feet of building space, and that such commercial districts be provided within a 1½ mile radius of the neighborhood centers, and be implemented through a "floating zone" concept.

6. Central Area Uses

The central area district is presently identified in the Town's zoning ordinance under the "Retail Business/Multi-Family Residential" designation. The area is bounded by a line just south of South Avenue, to the east by Birch Street and Crystal Avenue, to the north by Rollins Street and Lenox Road, and to the west by Maple Street as defined by the existing zoning ordinance. The central area includes much of Derry's early shopping facilities and is associated with West Derry at the turn of the century. Since that time it has adapted to contemporary use while other locations remain stagnant and not always in keeping with a central area setting.

The community goals identify this area as the focal point for the service and retail industry, recapturing and retaining Derry's "small-town" atmosphere. The Land Use Plan recognizes the asset this area provides to the community, as well as its need for revitalization. Presently it provides an area for commercial business and multi-family residences; in general, surrounding the core of West Broadway.

The Land Use Plan recommends the implementation of the downtown plan prepared by and adopted by the Town earlier in conjunction with the acquisition of the B & M railroad property. By implementing such a plan, residential, commercial and service industry uses will provide for a focal point for Derry, not only because of its established function as such over the past years, but because of its association with and accessibility to the Interstate network and adjacent Londonderry.

In bringing about this revitalization, the Town's Plan recommends a special design district designation controlling heights, signs and landscaping in the central area. It also recommends that

Historic Preservation efforts be implemented by retaining certain characteristic buildings of the area, and where that is not possible or appropriate, relocating them to a suitable environment.

7. General/Commercial Uses

In recognition of the demand created by the Town of Derry and surrounding communities, activities aimed at large-scale retail sales are proposed to be provided. These would be areas designated for accommodating retail establishments serving community and regional needs. They should be located on major traffic arteries and readily accessible to the community and the regional highway network. Their layout design must be controlled, through site plan review standards.

8. Industrial Uses

Presently, the Town of Derry has established a major industrial area of 500+ acres south of the urban complex. Much of the land area has already been developed as Residential. This southern industrial zone has shrunk to a smaller area, much of which is wetlands or only marginally suitable for development. It is therefore recommended that a new industrial area be proposed. This section of the economic development can be accommodated north of the urban complex of West Derry - north of the existing Industrial Park. The new area would bring industrial development in the vicinity of power lines north of Route 28 (Manchester Road), west of Route 28 Bypass (Londonderry Turnpike), and to the southern edge of the northern powerline R.O.W. The area can be serviced with water and should be given a high priority consideration in planning areas for sewage disposal services.

Industrial areas are needed for development of the community's employment opportunities and become an important part of the Town's economic development. The area's ability to reach regional highways and the availability of utilities are a primary consideration. These areas should be devoted to research, development, and other high-density employment activities.

These land areas should be preserved solely for the community's economic development, with installation of utilities and road and highway access suitable for industrial development encouraged by the Town. In reserving these land areas strictly for industrial development, incompatible uses ultimately resulting in conflicts, can be avoided. Future industrial areas should not be diluted by special exceptions and alternate use provisions. A performance standard concept should be implemented through a new, updated zoning ordinance.

9. Public Land Uses

The land use plan shows, in a generalized way, those areas that should be reserved for future public uses. These uses could include future school sites, a Town Center location, neighborhood playgrounds, areas for recreation, and parks for public enjoyment. The land areas are shown on the Town Plan so that the Planning Board, through proper administration of subdivision regulations, can assure the reserve of land areas for future community needs. It is recommended that the Planning Board adopt these measures in the Land Use Plan as a matter of public policy. This way, land areas will be available as community and neighborhood needs do arise. The recommended size of the areas designated in the Plan is 25 to 50 acres.

10. Open Space/Conservation Uses

Visually, functionally, and psychologically Derry is for the most part, an "Open Space" community. This is the result of some of the farmlands remaining and the retention of large tracts of forested areas. The next step must include preservation of the unique and fragile areas generally identified as wetlands and flood plains.

The Land Use Plan identifies Derry's flood-prone areas, wetlands, and those areas either marginally suitable or totally unsuitable for development. These should be required to remain undeveloped and be incorporated into the review process as land reserves - to be either privately or publicly held for the future.

In addition, the Land Use Plan suggests protecting some of the farm areas still in existence. These would help preserve the community's ever-decreasing open land resource. Preservation could be accomplished through acquisition of development rights, dedication from property owners, or through reservation of these areas from development through the Planning Board. The Plan identifies the farm areas which are generalized at this point. Their location would become more specific as the Planning Board reviews provide for the orderly development of Derry.

11. Office and Professional Uses

Because of the ever-increasing demand for professional and ancillary uses thereto, the Master Plan makes provision for two such areas. One is in conjunction with the Municipal Complex, and the other is in conjunction with the Parkland Hospital. It is envisioned that ancillary uses include banks and restaurants.

TABLE 5

Proposed Land Use Acreage Distribution*

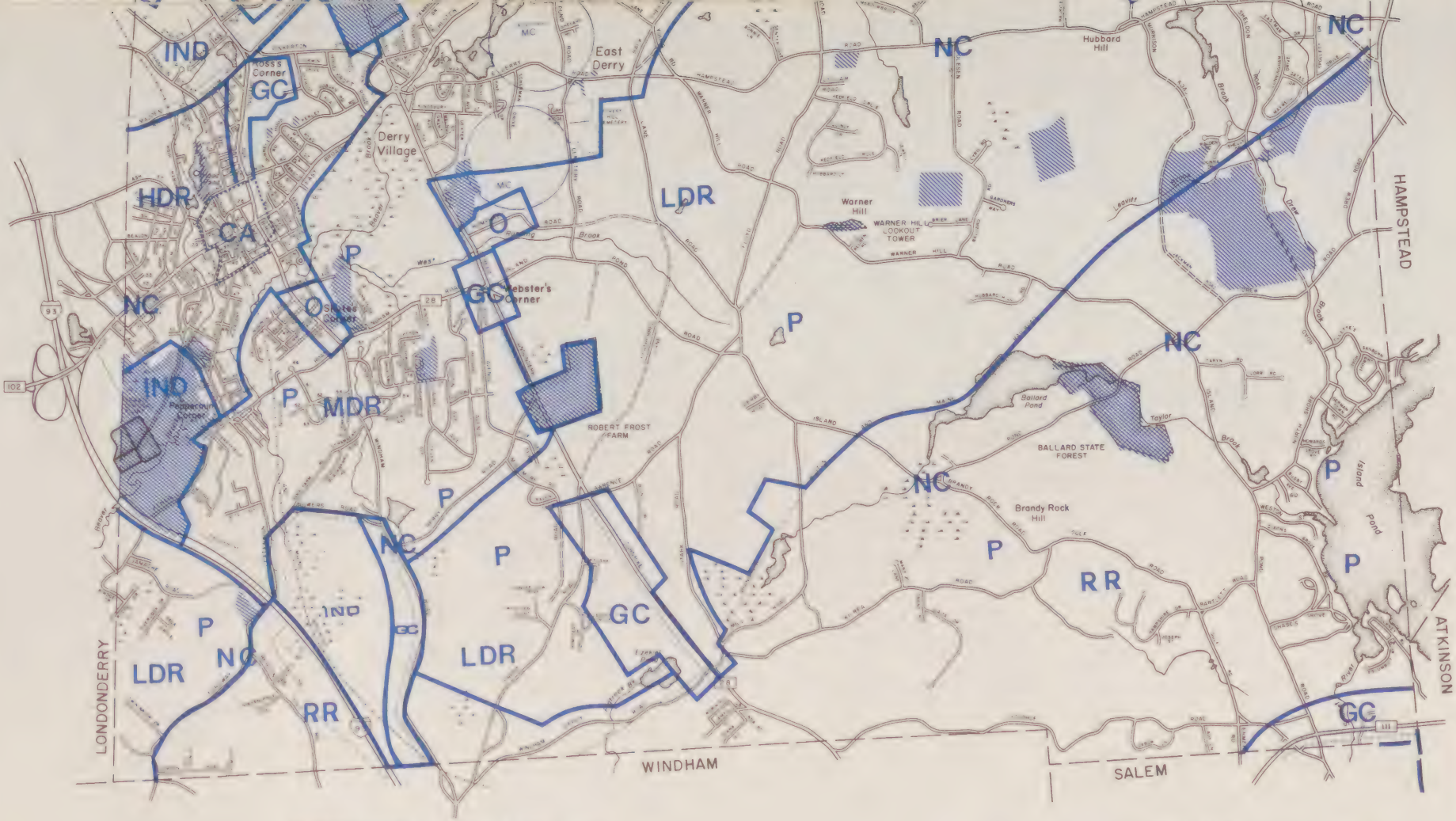
Designations:	RR	LDR	MDR	HDR	CA	IND	GC	O	TOTAL
Total Acreage**	8,692	6,714	3,780	812	74	747	703	82	21,604
Less: Unsuitable***	2,216	1,007	546	360	0	126	13	4	4,272
Buildable	6,476	5,707	3,234	452	74	621	690	78	17,332
Less: Rights-of-Way, Public & Developed	1,626	1,454	1,560	314	74	108	267	31	5,434
Remaining	4,850	4,253	1,674	138	0	513	423	47	11,898

Legend:

RR - Rural Residential
LDR - Low Density Residential
MDR - Medium Density Residential
HDR - High Density Residential
CA - Central
IND - Industrial
GC - General/Commercial
O - Office

*Does not include 386 acres of water surface, nor 895 acres of existing public and semi-public owned lands; Neighborhood Commercial and Proposed Public are designated sites only.
**Established by planimetric measure.
***Such as wetland and flood plain areas.


AUBURN
CHESTER
LONDONDERRY
SANDOWN
N
P
LDR
MDR
NC
P
RR
GC
GC
HDR
MDR
P
P
P
Lower Shields Pond
Adams Pond
Moore Hill
Beaver Lake
Butman Hill
Eastman Hill
102
121
28
1 ALANI AVE
2 SHANNON AVE
3 OPAL DRIVE
4 GREGOIRE ST
5 DRIFTWOOD RD
6 GREENWICH RD
7 LONDON RD
8 KENDALL WAY
9 ZAMBELLI ST
10 BOYD AVE
11 EAST BROADWAY AVE
12 WINTERTON AVE
13 BARNSTABLE DR
14 LAWRENCE ST
15 CHALMERS AVE
16 MANCHESTER AVE
17 WARRINGTON AVE
18 LAWRENCE AVE
19 BRITTON ST
20 LINCOLN ST
21 HOWARD ST
22 LAUREL ST
23 MOODY ST
24 MT WASHINGTON ST
25 HARDY CT
26 [illegible]
27 MC ALLISTER CT
28 PILLSBURY ST
29 WALKER CT
30 JEFFERSON ST
31 LINWOOD ST
32 WYMAN ST
33 [illegible]
34 LAWRENCE ST
35 CLARK ST
36 VALLEY ST
37 WEST EVERETT ST
38 DESMARAIS AVE
39 CENTRAL ST
40 SAWYER ST
41 ABBOTT ST
42 CENTRAL ST
43 MERCHANTS ROW
44 NORTH AVE
45 SOUTH WASHINGTON
46 [illegible]
47 MC GREGOR ST
48 SEVERANCE ST
49 [illegible]
50 [illegible]
51 [illegible]
52 [illegible]
53 [illegible]
54 [illegible]
55 [illegible]
56 MUZZY LANE
57 DRURY LANE
58 MARK STREET
59 ESCUMBUIT AVE
60 [illegible]
61 [illegible]
62 BRIAN AVE
63 TIBBETAIL CIRCLE
64 REDWOOD CIRCLE



Proposed Land Use Plan

areas

- RR Rural Residential
- LDR Low Density
- MDR Medium Density
- HDR High Density
- CA Central Area
- O Office

sites

- GC General Commercial
- IND Industrial
- P Proposed Public Sites (?)
- NC Neighborhood Commercial Sites (floating district)
- MC Municipal Complex Site

Existing Public/Semipublic

Marginal Access Rd

PREPARED BY HANS KLUNDER ASSOCIATES 1985

100 ACRES
25 ACRES
1 ACRE

NOTE: Boundaries not to scale.

All sites are nonspecific and subject to Town Council consideration and approval.

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

FEET 3000 2000 1000 0 1/4 1/2 3/4 1 MILE

SECTION III SOCIO-ECONOMIC CONSIDERATIONS

A. POPULATION

There are many factors which affect population change in a community. Some influences such as national economic conditions, the lack of taxation, policies to encourage growth by the State of New Hampshire, and geographic proximity to Massachusetts and employment opportunities are out of Derry's control. Some factors, such as a Master Plan to control growth and ordinances to direct growth where the community wants it to be, are within Derry's control.

In past Master Plans, Derry was labeled "a suburban bedroom community". Yet, the Town has many natural and historic amenities that make it an attractive community where people continue to want to work and live.

There is little doubt Derry will continue to grow. National and State trends suggest a slower rate of population growth than in the past. In the Public Opinion Survey, citizens asked for a slower rate of residential growth and an increase in light industrial growth. Derry can help make these desires happen in preferred areas where the environment can support it. In addition, efforts to protect wetlands, lakes, sensitive areas, and historic resources could maintain Derry's attractive character.

1. Population Growth

Derry was settled in 1719 and incorporated as Londonderry in 1722. During the 1700's, the original large tract of Londonderry contributed land to all or parts of Manchester, Hudson, Windham, and Salem, before the current Derry boundaries were established in 1827, by the splitting off of Londonderry. Figure 1 shows historic population change in Derry. Losses in population correspond to periods of agricultural decline, when competition from western agriculture and employment opportunities in mills to the south caused a similar decline throughout New Hampshire. A slight population loss showed in the 1930's. Since 1940 there has been a steady rise in population. There was a sixty-eight percent increase between 1960 and 1970, and a sixty-one percent increase between 1970 and 1980. These dramatic increases were also experienced in many southern New Hampshire communities due to accessibility to Massachusetts and the economic expansions around the Boston-Metro area.

With such dramatic increases in population, Derry absorbed a much greater increase than that experienced by Rockingham County as a whole. In 1960 Derry had only seven percent of the total County population. By 1980 this rose to 10 percent, as indicated on Table 6. Two of Derry's neighbors, Londonderry and Salem, experienced similar exponential growth.

From 1980-1984 the growth rate in Derry slowed considerably, possibly due to national economic conditions, local service constraints on building, and smaller family household sizes. However, the Town still moved from a

FIGURE
1

POPULATION CHANGE FOR DERRY, NH AND SELECTED TOWNS
1830 - 1980
Source: US Census of Population

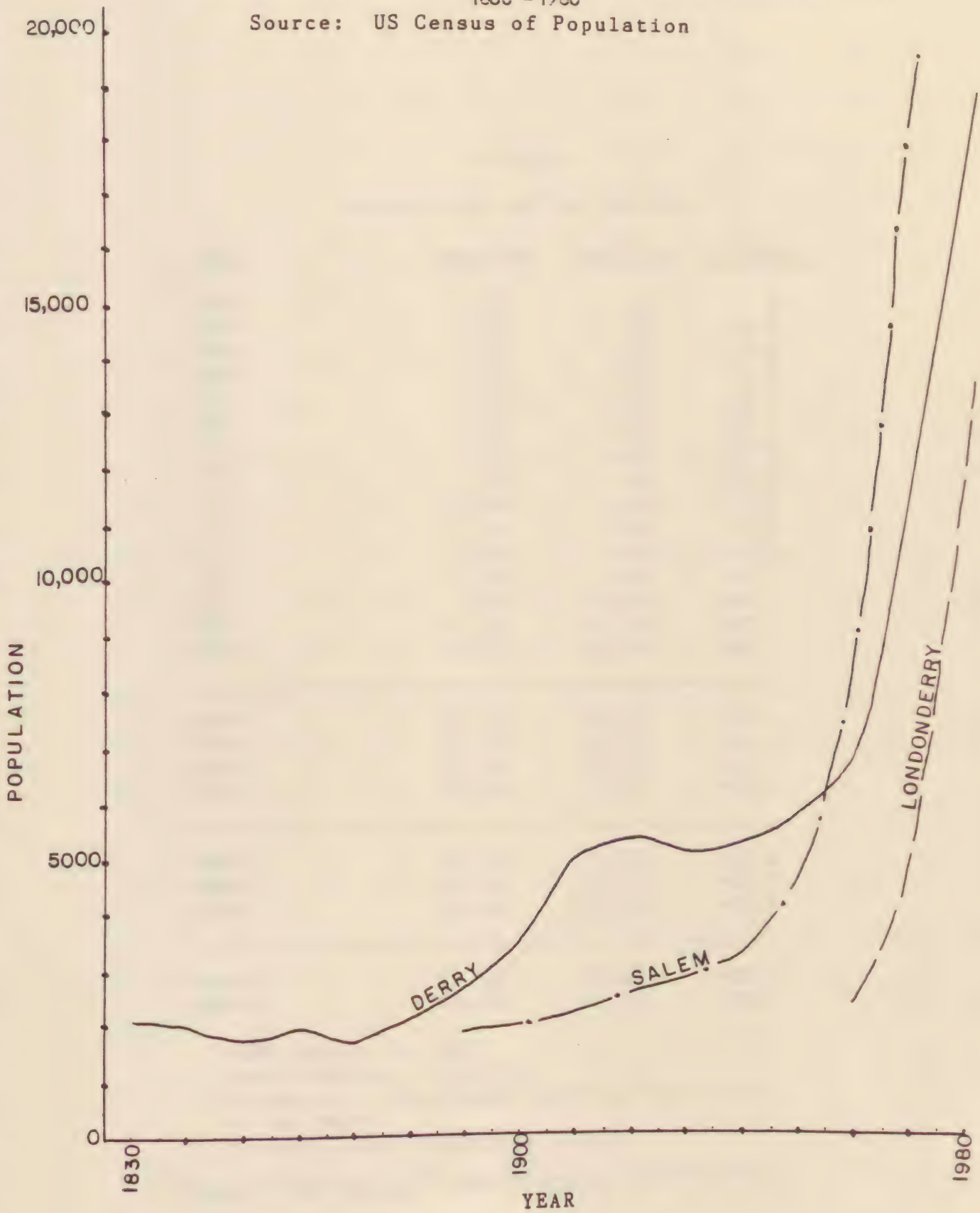


TABLE 6

DERRY POPULATION GROWTH

Year	Population	Gain/Loss	% Change
1830	2,176	0	0
1840	2,034	-142	-6.5
1850	1,850	-184	-9.0
1860	1,995	+145	+7.8
1870	1,809	-186	-9.3
1880	2,140	+331	+18.2
1890	2,604	-464	-22.0
1900	3,583	+979	+37.6
1910	5,123	+1,540	+43.0
1920	5,382	+259	+5.1
1930	5,131	-251	-4.6
1940	5,400	+269	+5.2
1950	5,826	+426	+7.9
1960	6,987	+1,161	+19.9
1970	11,712	+4,725	+67.6
1980	18,875	+7,163	+61.2
1984*	21,411	+2,536	+13.4
1990*	27,176	+8,301	+44.0
2000*	33,983	+6,807	+25.0
2010*	39,664	+5,681	+16.7
1990**	30,175	+11,300	+59.8
2000**	40,000	+9,825	+32.5
2010**	50,000	+10,000	+25.0
1990***	27,500	+8,625	+45.6
2000***	34,000	+6,500	+23.6

* OSP Estimate for 1984 and Preliminary Projections

** Projection for the decade based on first 4 years of the 1980's

*** Planned Growth Projections (HKA)

Source: US Census of the Population

relatively small community of 6,987 in 1960, to a "City" approaching 19,000 people in two decades. In fact, Derry is fast approaching a population the size of Portsmouth or Salem, the County's two largest communities. Based on the 1980-1986 trend, a population increase of 11,300 people* can be expected by 1990. Further on, Derry should plan for a population of 34,000-36,000 by the year 2000 unless local development management can effectively reduce this rate of growth.

2. Population Distribution - Geographic

The 1965 Comprehensive Planning Program noted that population growth between 1950 and 1960 occurred largely in the Beaver Brook Valley, West Derry, Derry Village and East Derry. At this time, developed area covered approximately 10% of the total land area. When growth intensified in the 1980's, the trend in land consumption continued. Scattered residential subdivisions are in evidence in many locations in the eastern half of Derry. In addition many homes are still outside the sewered downtown areas.

On an overall basis, Derry had a population distribution of 1.1 acre/persons in 1984. This compares to a distribution of 3.3 acre/persons in 1960 and 1.9 acre/persons in 1970. Similarly, acres per family have decreased from 7.7 in 1970 to 4.6 in 1980**.

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*Based on an average annual increase of 1,130 persons/year, 1980-1986.

**U.S. Census, 1970, 1980.

Population growth and residential development also resulted in the conversion of land from open space. In 1965, approximately 10% of the land area was developed. By 1982*, 21% of land in Derry was developed. As growth continues, it is important to describe where development can best be accommodated with least expense to Derry when providing services and at minimal or zero impact on the natural environment. The Master Planning process can help Derry accommodate development with community goals and the protection of open spaces which are important to the Town.

3. Population Distribution - Age

Population distribution by age and sex for Derry is shown on page 33. The pyramid indicates Derry has followed national trends with a population that is living longer, and the advent of smaller family size. The late "baby boomers", shown as children in the 1960's, are now of working age. The greater number of people shown between the ages of 25 and 45 also represent an in-migration of child-bearing age families who are taking advantage of employment opportunities in southern New Hampshire and the Greater Massachusetts Metro area. Table 8 shows natural population increase and Figure 2 also supports the conclusion that a high segment of the population is in the child-bearing age group. Community services and improvements should be provided at a time when much of the population is of employable age, rather than elderly or of school age.

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*See Existing Land Use Study.

TABLE 8

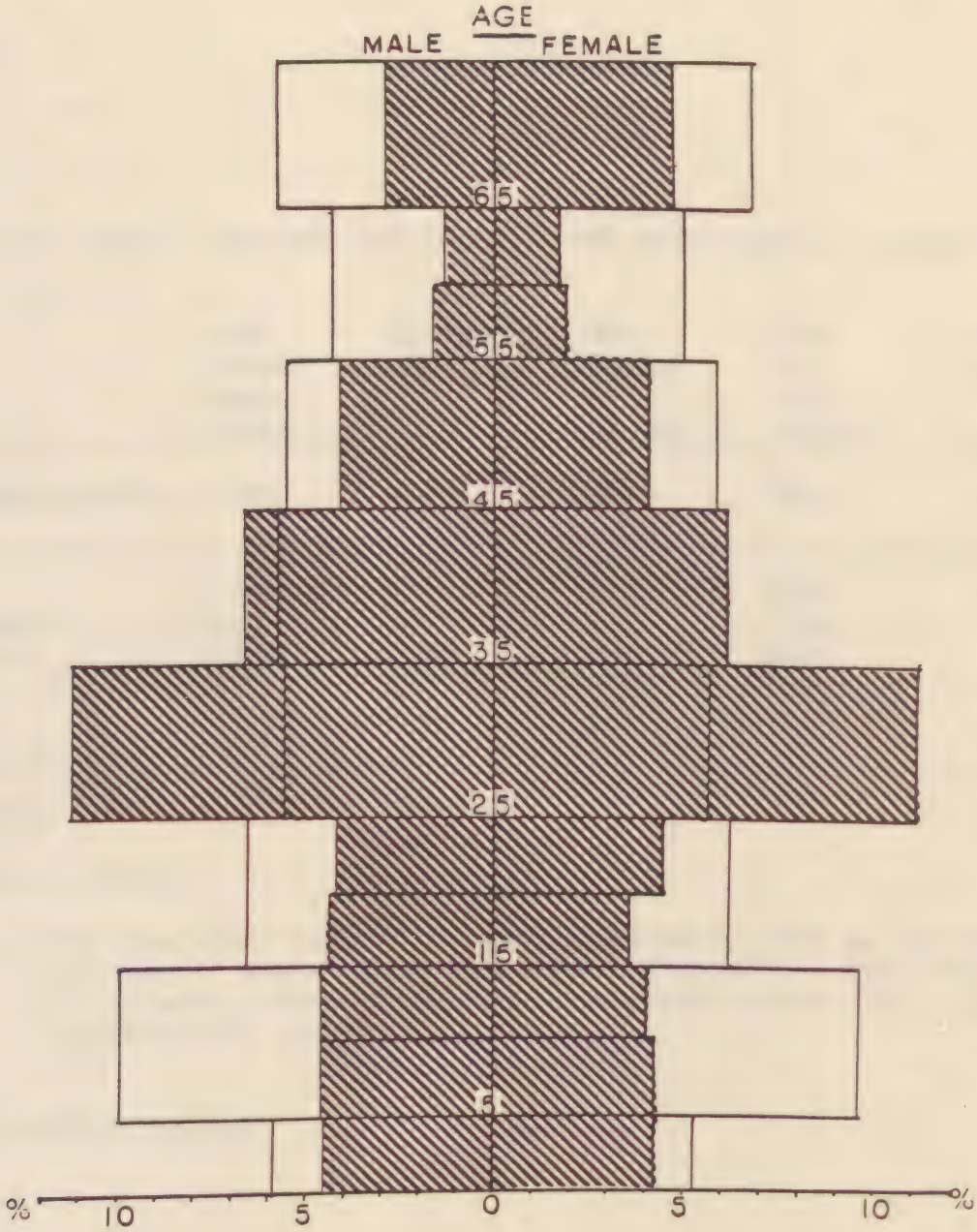
DERRY RESIDENT BIRTHS, DEATHS, AND NATURAL INCREASE
(1950-1984)

Year	Resident Births	Resident Deaths	Natural Increase
1950	156	95	61
1951	146	84	62
1952	154	74	80
1953	147	98	49
1954	158	70	88
1955	150	100	50
1956	158	84	74
1957	142	83	59
1958	154	74	80
1959	172	72	100
1960	180	88	92
1961	196	84	112
1962	166	85	81
1963	216	98	118
1964	191	92	99
1965	211	86	125
1966	212	87	125
1967	224	103	121
1968	229	120	109
1969	279	107	172
1970	264	87	177
1971	304	89	215
1972	295	105	190
1973	279	110	169
1974	310	115	195
1975	316	125	191
1976	331	124	207
1977	312	100	212
1978	324	109	215
1979	363	116	247
1980	393	146	247
(Subtotal)			(4122)
1981	410	135	275
1982	414	119	295
1983	420	118	302
1984	450	138	312
1985	407	152	255
(TOTAL)			(5561)

Source: NH Bureau of Vital Statistics

FIGURE 2

DERRY, NH POPULATION DISTRIBUTION BY AGE AND SEX, 1960-1980



Source:

1960 U.S. Census of Population
1980 U.S. Census of Population

TABLE 9

MEDIAN FAMILY INCOME FOR DERRY AND ROCKINGHAM COUNTY

Area	1979 Median Family Income*	Change '69 '79 of P.C.I.	1979 Median HHold Income*	1979 Per Cap Income	% Persons In Poverty
Rockingham County	21181	4408	18993	7445	6.6
Derry	21631	4496	19969	7402	5.9
Londonderry	23861	4762	23027	7705	3.6
Portsmouth	17270	3669	14426	6416	9.3
Salem	23196	4246	21248	7611	5.6
Windham	27650	6306	26692	9647	4.3
State of NH	19723	3981	17013	6966	8.5

*(15 years or older)

Note: The "household income" is income received in 1979 by all the household members, 15 years of age and older. This differs from "family income" by excluding income received by household members not related to the householder or persons living alone.

Source: 1980 US Census

Natural increase from 1950 through 1980 for Derry was 4,122 persons. The total population increase in this period is 13,049. The trend toward smaller family size with fewer children per household continued from a household size of 3.3 persons in 1970 to 2.8 persons in 1980*.

4. Population Trends

Derry's population characteristics and trends have many implications for Derry's future planning. A population that is dominated by persons in the childbearing and working years (age 25-45) will make different demands on community services than will a younger or older population. A great number of women in their childbearing years may result in an increasing school population for future years despite a national trend toward smaller families. An older population makes different demands for recreation services and opportunities. Derry's citizens noted the need for a community center, ballfields, skating rink, indoor pool, boat launch, and bicycle trails. In addition, a population largely commuting to work needs better access roads to major highways and improved road maintenance; and commercial/retail enterprises and the central business district may undergo a change in hours and types of services offered to meet resident commuter needs.

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*U.S. Census

While the rate of growth appears to have slowed, Derry should still plan for further increases and for the changing demands of the population for services. The designation of areas where growth should occur and discouragement of scattered development will help Derry meet the needs of an expanding population with minimal financial and environmental cost.

5. Population Projections

The 1965 Comprehensive Planning Program projected accelerated growth for Derry - a population of 19,500 by 1985. This estimate for 1985 is lower than the New Hampshire Office of State Planning's 1984 estimate of 21,411 and the Southern New Hampshire Planning Commission's 1983 estimate of 22,471 people and most recent estimates of 25,656 in 1986.

One of the responsibilities of updating a Master Plan is to examine population growth and prospects for the future. Figure 3 shows the accelerated growth rate Derry experienced in the 1960's and 1970's, as well as projected growth rates. This growth is parallel to the State of New Hampshire growth as a whole and in Rockingham County. Derry does, however, have a unique situation in that extensive development in the early 1980's was curtailed by a ban imposed by the State while Derry upgraded sewage treatment facilities. Recent residential building of apartments and condominiums is extensive. Building permit figures for 1984 (see Table 10) show 216 new condominium units, 300 apartments, and 160 duplexes, not including pending projects of 800 units.

FIGURE 3

POPULATION PROJECTIONS, DERRY, NH

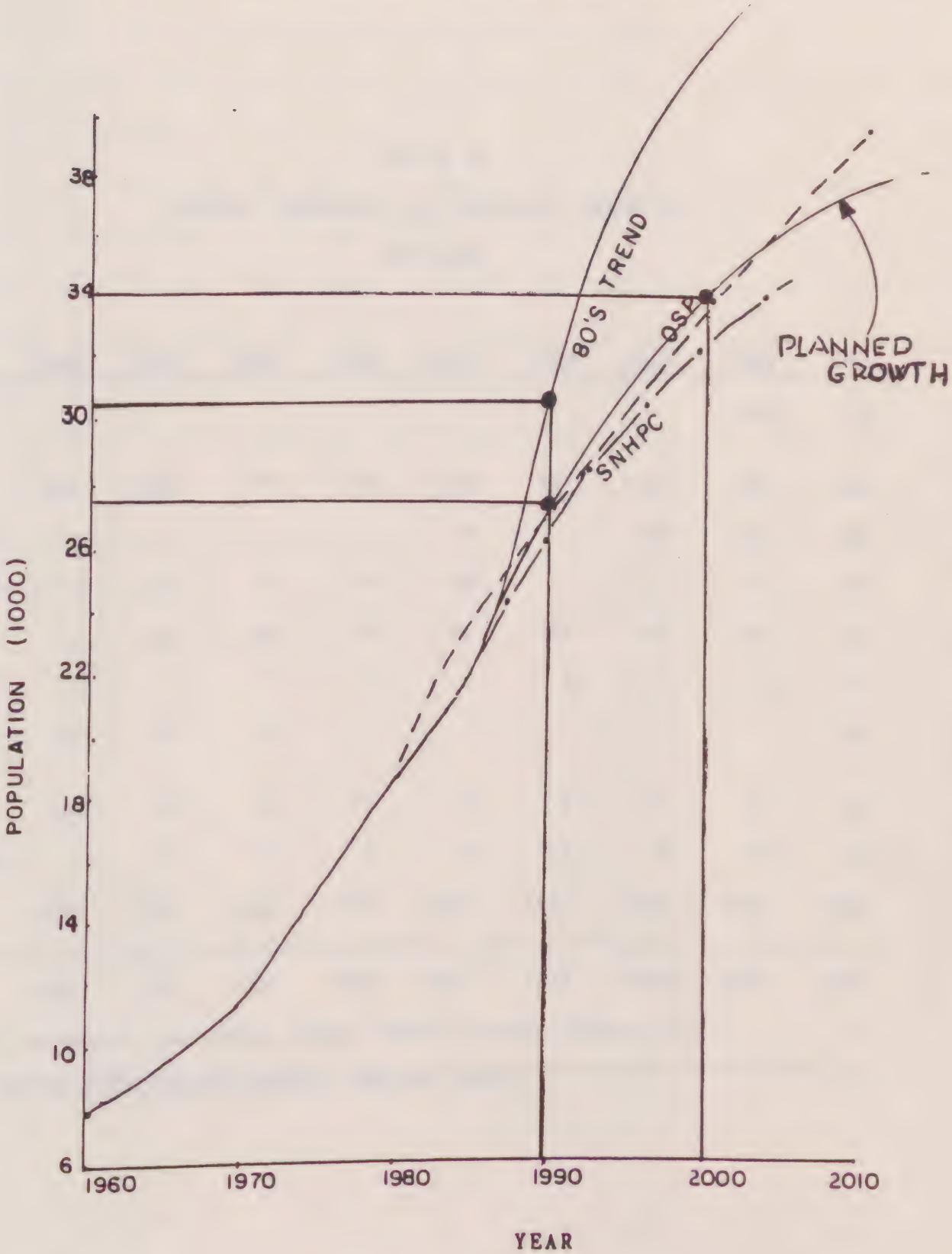

TABLE 10

DERRY SUMMARY OF BUILDING PERMITS

1977-1984

Permit	1977	1978	1979	1980	1981	1982	1983	1984	Total
Condo.								216	216
Single Family	226	210	177	145	140	151	203	206	1458
Apartment					8		156	300	464
Renewals	7	33	13	14	60			14	141
Duplex	8	22	23	32	61	36	45	160	387
Industrial	1	1	1	3	1	4	7	3	21
Business	50	47	8						105
Mobile Homes	25	8	8	13	8	9	11	11	93
Commercial	1	4	4	7	8	18	9	18	69
Other*	321	384	455	542	1065	1104	1384	1743	6998
TOTAL	639	709	689	756	1351	1322	1815	2671	9952

*Additions, chimneys, plumbing, wells, razing, barns, signs, etc.

Source: Building Inspector's Office, Town of Derry.

However, in the Public Opinion Survey, residents asked for more emphasis on the development of light industry and single family homes. Should such desires be implemented through adoption of policies toward changes in ordinances, Derry's population growth curve might alter the 1980-1986 trend.

A Master Plan for Derry, in response to citizen desires, should plan for a population of 34,000 to 36,000* by the year 2000. Planning now for new services that these future residents will demand allows the Town to direct where growth will occur - in areas where services, such as sewer and water, can be easily or inexpensively extended, while Derry's lakes, wetlands and open spaces are also protected from scattered development at the same time.

---

*See Table 6.


AUBURN
CHESTER
LONDONDERRY
SANDOWN
N
1 ELAINE AVE
2 ELLANOR AVE
3 OPAL DRIVE
4 GREGOIRE ST
5 DRIFTWOOD RD
6 GREENWICH RD
7 LONDON RD
8 KENRO WAY
9 ZAMES ST
10 COLE AVE
11 LAKE SHORE AVE
12 GRANDVIEW AVE
14 LARAWAY CT
15 CONCORD AVE
16 MANCHESTER AVE
17 CLAREMONT AVE
18 LACONIA AVE
19 BERLIN ST
20 LINCOLN ST
21 HOWARD ST
22 LAUREL ST
23 MOODY ST
24 MT WASHINGTON ST
25 HARDY CT
26 PEARL ST
27 MC ALLISTER CT
28 PILLSBURY ST
29 WALKER CT
30 JEFFERSON ST
31 LINWOOD ST
32 WYMAN ST
33 LINDEN ST
34 LAWRENCE ST
35 CLARK ST
36 VALLEY ST
37 WEST EVERETT ST
38 DESMARAIS AVE
39 CENTRAL ST
40 SAWYER ST
41 ABBOTT CT
42 CENTRAL CT
43 MERCHANT'S ROW
44 NORTH AVE
45 SOUTH RAILROAD
46 ALADDIN CIRCLE
51 FLORENCE ST
52 LOWELL ST
53 SUNSET CIRCLE
56 MUZZY LANE
57 DRURY LANE
58 MARK STREET
62 BRIAN AVE
63 TIGERTAIL CIRCLE
64 REDMOND CIRCLE
Lower Shields Pond
Beaver Lake
Adams Pond
Moore Hill
Butman Hill
Eastman Hill
Cunnington
28
102
121

Population Distribution
1985

LEGEND

- • Dwelling Unit
- (12) Dwelling Units
- [27] Mobile Homes In Park

100 ACRES
25 ACRES
1 ACRE

SOURCE: DERRY PHOTOMOSAIC, NOT FIELD CHECKED
PREPARED BY: HANS KLUNDER ASSOCIATES, NOV. 1985

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

FEET 1000 2000 3000 0 1/4 1/2 3/4 1 MILE

Population Distribution
1985

LEGEND

- • Dwelling Unit
- (12) Dwelling Units
- [27] Mobile Homes In Park

100 ACRES
25 ACRES
1 ACRE

SOURCE: DERRY PHOTOMOSAIC, NOT FIELD CHECKED
PREPARED BY: HANS KLUNDER ASSOCIATES, NOV. 1985

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

FEET 3000 2000 1000 0 1/4 1/2 3/4 1 MILE

B. ECONOMIC BASE

1. Overview

The 1965 Comprehensive Planning Program and the 1978 update described Derry's increasing role as a residential suburb. In 1965, the traditional shoe industry accounted for over 80% of manufacturing employment in Derry. Recommendations in the plans noted that diversified industrial development was desirable to relieve dependence on the one industry. By 1980, 73% of Derry residents were driving out of town to work; 34% of Derry residents were traveling to Massachusetts. (See Table 11, Place of Employment.) Due to this mobility, most Derry residents were not shopping in town, but were utilizing the Derry Shopping Plaza in Londonderry, the Mall of New Hampshire, and the Bedford Mall.

Today, the shoe industry is no longer the primary source of manufacturing employment for Derry residents. Manufacturing opportunities have diversified, and the percent of residents employed in manufacturing has declined. Although the citizens survey shows about 68.9% of residents still driving out of town to work, general industrial, retail, and commercial development has not kept pace with population growth. (See Table 10, Summary of Building Permits.)

Opportunities for light industrial, retail and services business development are extensive, particularly since many residents favored these in the Opinion Survey. A majority of residents would prefer to work in

TABLE 11

DERRY, NH - PLACE OF EMPLOYMENT - 1980

Area	Employees
Manchester/Downtown	108
Manchester (remainder)	891
Bedford	68
Goffstown	48
Hooksett	54
Derry	2,564
Londonderry	438
Nashua	447
Merrimack	150
Nashua SMSA	272
Lowell, MA SMSA	219
Lawrence City, MA	427
North Andover, & Town of Andover	345
Salem & Windham	543
Lawrence/Haverhill, MA SMSA (remainder)	157
Boston	214
Boston SMSA	971
Concord City	128
Elsewhere	407
Not reported	1,013
Total Workers Residing in Derry	9,464

Source: US Census of the Population

Derry. A unique opportunity exists in Derry to provide increased employment. Redevelopment of the central business district, which would serve to unify the community, extension of shopping opportunities on Route 102 (East and West Broadway), and continued building in the industrial park will advance these efforts; and the slow growth seen in the Industrial Park can be expected to increase with the recent purchase by the Nash Co.

2. The Components of Derry's Economy

Communities that rely primarily on residential development for tax base support are hit doubly hard with expenses in providing services such as school, police, and fire protection. Derry has an opportunity to broaden its tax base by utilizing its local work force. The following statistical analysis describes trends in economic growth for the State of New Hampshire, Rockingham County and Derry.

Derry's economy consists of three basic industries - Manufacturing, Service/Retail and Tourism/Entertainment. The third industry plays a minimal role in Derry's economy. Derry's lakes have attracted seasonal residents; however, many of these persons shop outside of Derry for goods and services. Also, conversion of seasonal dwellings to year-round is reducing the number of non-residents while increasing needs to provide town services. Even with the location of Pinkerton Academy, the government and institutional industry also play a small role in Derry's economy.

3. Workforce Characteristics

An analysis of workforce characteristics is important to understanding possible changes in the roles of these industries within Derry's economy. As noted in the introduction to this section, approximately 73% of the resident population travel outside Derry to work. (See Table 11, Place of Employment.) Of those, who travel outside, 34% (2,333) work in Massachusetts or in predominantly Massachusetts Standard Metropolitan Statistical Areas ("SMSAs"), 14% work in the greater Manchester area, 6% work in the Nashua area, and 18% work within Derry's region.

Employment of Derry residents is shown on Table 12. In 1970, 4614 residents were employed while in 1980 there were 9466. The largest increase from 1970 to 1980 was in Technical, Sales, and Administrative positions. Increases in Managerial and Professional positions was also high. The number of unemployed in Derry, following the state's trend, is a very small percentage of the total workforce. In 1980, Derry shows a substantial number of females, not in the workforce, representing an untapped resource should more jobs be provided in Town.

4. Income

An understanding of income characteristics as well as occupations can help Derry plan for expansion of retail/service and industrial opportunities that will meet the needs and income of the population. Income characteristics also allow a comparison between communities. Table 13, Median Family

TABLE 12

EMPLOYMENT OF DERRY RESIDENTS

Occupation (16+ years)	1980	1970
Civilian:		
Managerial and Professional	2322	1058
Technical, Sales and Administrative	3031	1006
Service	769	450
Farming, Forestry, Fishing	72	27
Precision Production, Craft and Repair	1384	802
Operations, Fabricators, and Laborers	1851	1255
Armed Forces:	35	16
TOTAL EMPLOYED	9464	4614
Male	5511	2960
Female	3953	1654
TOTAL UNEMPLOYED	371	211
Male	212	83
Female	159	128
TOTAL NOT IN LABOR FORCE	3704	2673
Male	899	605
Female	2805	2068

Source: 1970/1980 U. S. Census
Comparison Tables 59/66

TABLE 13

MEDIAN FAMILY INCOME FOR DERRY AND ROCKINGHAM COUNTY

Area	1979 Median Family Income*	Change '69 '79 of P.C.I.	1979 Median HHold Income*	1979 Per Cap Income	% Persons In Poverty
Rockingham County	21181	4408	18993	7445	6.6
Derry	21631	4496	19969	7402	5.9
Londonderry	23861	4762	23027	7705	3.6
Portsmouth	17270	3669	14426	6416	9.3
Salem	23196	4246	21248	7611	5.6
Windham	27650	6306	26692	9647	4.3
State of NH	19723	3981	17013	6966	8.5

*(15 years or older)

Note: The "household income" is income received in 1979 by all the household members, 15 years of age and older. This differs from "family income" which excludes income received by household members not related to the householder or persons living alone.

Source: 1980 US Census

Income, shows the change from 1969 to 1979 for Derry, selected towns, and Rockingham County. It should be noted that "family income" is that income received in the calendar year 1979 by all family members 15 years of age and older.

Income figures indicate that Derry has a median household income which is higher than the Rockingham County and State of New Hampshire median for 1979. The percent of persons in the poverty rank (5.9) is also lower than the County average of 6.6% and the State average of 8.5%. For planning purposes, these statistics indicate Derry residents are in the middle to upper income brackets. Retail establishments and service industries in Derry appears able to market quality products successfully.

5. Manufacturing Employment

Approximately 33% of jobs provided in Derry are in the manufacturing sector, as shown on Table 14. Table 14 also indicates that in 1984, the number of employees working in Derry manufacturing establishments is a smaller percentage of the total employment in Derry (33%) than was shown in 1974 (44%). Of those persons employed in Derry, a greater percentage work in manufacturing than is true of the Manchester labor market as a whole.

Payroll and value added by manufacturing have increased, yet the number of establishments has remained constant. Despite this, the manufacturing industry has diversified as indicated on Table 15, Listing of Manufacturers. While Klev-Bro Shoe Manufacturing Company still accounts

TABLE 14

DERRY, NH EMPLOYMENT AND WAGES
AS PART OF THE MANCHESTER LABOR MARKET AREA

Industry	Average Employment		
	1974	1980	1984
Total	3174	4367	5220
Manufacturing	1407	1997	1746
Non-Manufacturing	1767	2370	3474

Industry	Total Wages		
	1974	1980	1984
Total	$19,336,573	$45,583,207	$69,137,227
Manufacturing	9,555,374	23,974,949	28,015,661
Non-Manufacturing	9,781,199	21,608,258	41,121,566

Industry	Average Weekly Wages		
	1974	1980	1984
Total	$117.16	$200.73	$254.71
Manufacturing	130.60	230.87	308.57
Non-Manufacturing	106.45	175.33	227.63

1983 MANCHESTER LABOR MARKET TOTALS

	Average Employ.	Total Wages	Average Week
Total Industry	64770	$945,168,744	$280.63
Manufacturing:	16561	284,899,364	$330.83
Durable Goods	9374	169,744,985	348.23
Non-Durable Goods	7187	115,154,379	308.13
Non-Manufacturing	48209	660,269,380	263.38
Construction/Mining	3305	61,767,730	359.41
Trans. Comm.	3165	74,079,277	450.11
Trade	19499	213,498,201	210.56
Fin. Insur. RE	5916	93,610,893	304.30
Services & Other	16324	217,313,279	256.01
Government	5573	83,343,525	287.59

Source: NH Dept. of Employment Security

for the largest number of employees, it only employs approximately 30% of manufacturing employees, as compared to 80% employed in the shoe industry in 1965.

Table 16 shows non-agricultural wage and salary projections for the Lawrence/Haverhill SMSA for 1990. Continued growth in employment opportunity is indicated for the towns surrounding Derry. Slightly less than half of the growth is expected to be in manufacturing. Similarly, opportunity in Derry can be expected to grow as building continues in the Industrial Park. To meet desires of residents for local employment, Derry should plan to utilize a greater percentage of employment growth than in the past.

6. Retail and Service Trade

As indicated in the manufacturing section, 67% of employment in Derry now falls outside of the manufacturing sector. Table 17 shows retail trade statistics for Derry. While the total number of establishments has not increased substantially from the late 1960's, the number of employees and annual sales have increased. From 1967 to 1982 the number of payroll employees increased by 663 persons. Approximately 2,000 people may be employed in the retail trade if non-payroll employees are also included. Thus, a greater number of persons may be employed in the retail trade than are in the manufacturing trade. Retail is playing an increasing role in Derry's economy.

The opportunities for retail expansion are also considerable as a

TABLE 15

LISTING OF MANUFACTURERS

DERRY, NH - 1984

MANUFACTURER	#EMPLOYED	PRODUCT	AGE	SALES**
Black Rock, Inc.	8	Giftware	1971	D
Blondheim Modular Manu., Inc.	75	Modular Housing	*	*
CNC Precision, Inc.	2	Machine Shop	*	B
Chase, Benjamin Co., Inc.	15	Wooden plant stakes	1867	B
Columbia Screw Co., Inc.	15	Screw machine products	*	*
Eastern Rainbow, Inc.	25	Color separations	1977	E
Electronics Corp. of America	110	Combustion control sys.	*	*
Fishercraft, Inc.	8	Pine gifts	1978	*
Galluzzo, Anthony Corp.	21	Architectural millwork	1983	*
Gschwind, Karl, Machine Works	17	Machine shop	1965	D
Gentex Corporation	27	Acoustic devises	1974	D
Hadco Printed Circuits, Inc.	*	Printed circuit boards	*	*
Hatch Printing Co.	4	Commercial printing	*	*
Hawk Quality Products, Inc.	15	CNC equipment	*	*
Industrial Container, Inc.	3	Wooden shipping cont.	1958	*
Jesco Fasteners Co.	3	Fasteners	1980	A
Klev-Bro Shoe Mfg. Co.	400	Womens shoes	*	*
Mark-All Industries	15	Silk-screening textiles	1973	C
McCord Winn Subsid. Ex-Cell-O	20	Auto fuel pump armats.	1982	D
Photofabrication Tech. Inc.	56	Electric components	1974	E
Shaw, John E., Co., Inc.	12	Machine Shop	1952	B
Standard Sash & Door Company	65	Windows & door units	1941	F
Thornton Mfg. Co., Inc.	7	Aluminum resistor hous.	1964	C
Treasure Masters Corp.	200	Wedding and baby gifts	*	*

*Complete information not available for:
Continental Group, Inc., Derry Publishing Co., and LeBlanc Plastics, as well as those noted above.

**Key:

A - under $100,000
B - $100,000 - $250,000
C - $250,000 - $500,000
D - $ 500,000 - $ 1,000,000
E - $1,000,000 - $ 5,000,000
F - $5,000,000 - $10,000,000

Source: Made in New Hampshire, a Directory of Manufacturers and Manufactured Products, 1984/85 edition.

TABLE 16

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
(ESTIMATED AND PROJECTED)

NH Portion Lawrence-Haverhill SMSA[1]	1979	1990	Net Change
Total Industry	14,250	22,100	7,850
Manufacturing	3,950	7,400	3,450
Durable Goods	3,250	6,650	3,400
Primary and Fabricated Metals	450	750	300
Machinery (including electrical)	2,000	4,850	2,850
Stone & Clay, Transportation, Equipment, Instruments & Other	800	1,050	250
Nondurable Goods	700	750	50
Non-Manufacturing	10,300	14,700	4,400
Construction & Mining	750	850	100
Trade	5,050	7,400	2,350
Services	1,950	2,950	1,000
Government	2,000	2,750	750
Other	550	750	200

1 Derry should note that labor market figures for 1985 and future projections will list Derry with the Lawrence/Haverhill statistical area, rather than with the Manchester area as in the past.

Source: NH Department of Employment Security, 1982.

TABLE 17

NUMBER OF RETAIL TRADE ESTABLISHMENTS
BY TYPE AND SALES VOLUME: DERRY, NH

Business	No. of Establishments			Sales (in $1,000)		
	1967	1977	1982	1967	1977	1982
Building Materials, Hardware, & Farm Equipment Dealers	5	13	6	$1107	$3522	$4276
General Merchandise	3	5	5	385	*	8849
Food Stores	14	17	10	4044	14960	20919
Automotive Dealers	7	13	7	3302	13627	*
Gas Service Stations	9	10	9	*	*	7945
Apparel & Accessory Stores	9	5	8	405	664	1109
Furniture, Home Furnishings, & Equipment Stores	8	12	6	402	1108	867
Eating & Drinking Places	12	23	15	303	2798	4086
Drug Stores & Proprietary Stores	2	3	4	*	1075	2087
Misc. Retail Stores	23	36	19	2484	9483	*
Nonstore Retailers	9	0	0	118	0	0
Business w/o Payroll	0	0	60	0	0	0
TOTALS	101	137	149	$14251	$55198	$76429

*Indicates information withheld in census publication to avoid disclosure.

Source: US Census of Business, Retail Trade

majority of Derry's residents shop outside of town. Any area planned for future retail development should be carefully integrated with plans to upgrade Derry's downtown and with commuter patterns.

Service industry comparisons are indicated on Table 18. As with retail, while growth in employment and sales has increased, service industries are not playing as large a role in Derry's economy as they might. In the Attitude Survey, residents expressed a need for more service industries.

7. Socio-Economic Considerations

From the preceding discussion on population and the economy, Derry appears to be continuing a role established in the 1960's as a bedroom community. Building permit records bear this out (see Table 10). Development in Derry has created additional jobs for employees as the local population has grown, but the percentage of residents working outside of Derry has remained constant at a high level of 73%.

The nature of the employment opportunity in Derry has changed, putting less emphasis on manufacturing and diversification of the manufacturing industry. However, there is considerably more opportunity to expand light industrial and retail activities in Derry. As noted on page 41, there are a number of women not in the labor force who might be if local employment were provided. Of the 9,464 Derry residents who were employed in 1980, the Public Opinion Poll indicates there are many who would prefer working in Derry.

TABLE 18

NUMBER OF SERVICE INDUSTRIES BY TYPE & SALES VOLUME

DERRY, NH - 1967-1982

Industry / Year:	Type 1967	Type 1977	Type 1982	Sales (in $1,000) 1967	Sales (in $1,000) 1977	Sales (in $1,000) 1982
Hotels/Motels	5	9	3	*	281	455
Auto Repair/Garages	7	22	10	*	1,513	1,563
Amusement/Recreation	13	22	4	*	540	251
Health (excluding hospitals)	N/A	N/A	21	*		4,317
Legal		6	5	*	549	575
Personal Service	27	74	173**	*		
Miscellaneous Bus.	13			*	1,253	4,501
Miscellaneous Repair		16		*	387	
TOTALS	65	149	216	1,497	4,523	11,662

*Individual breakdown not available.
**Estimated.

Source: US Census of Service Industries

SECTION IV HOUSING

The 1965 Comprehensive Planning Program for Derry projected a 1985 population of 15,800 to 19,000 persons and a need for 2,400 new dwelling units. As projected, Derry could have 5,080 homes. However, statistics show a much larger total of over 9,000 housing units. As noted in the population section of this report, Derry, like many other communities in southern New Hampshire, has experienced dramatic increases in growth. In recent years, Derry has also seen an explosion of apartments and multi-family housing. These factors and trends toward smaller family size have all contributed to more housing units in Derry than those anticipated by past studies.

Housing is a major element of land use in Derry. As indicated in the Land Use section of this report, much of Derry's new housing, particularly single family homes, is occurring in scattered locations throughout Town. Thus, in 1985 Derry was faced with a rapidly expanding population, due to an influx of new construction that was randomly placed on the land, and a need to assess adequate provision of housing for an expanded future population.

Chapter 674:2, Part II of the New Hampshire State Enabling Legislation states that a Master Plan shall include "A housing section which analyzes existing housing resources and addresses future housing needs." To comply with this requirement, an inventory of housing resources must be conducted and reviewed, existing and future housing needs must be studied, and economic consideration must be given to provide adequate

housing for varied income groups and family sizes.

Derry has started this process. A Town Subcommittee on Housing has compiled many statistics for the 1985 Master Plan Revision. Several statistics are included herein. In reviewing housing conditions and concerns, Derry must consider not only the impact on Town resources, but also on community services and the overall character of the Town and its subsections. These are all affected by types and quality of housing.

Table 19 and Figure 4 show Derry's substantial increase in housing supply and reveals a correspondence with the extensive population growth. The number of units added to the supply was 3,251 between 1970 and 1980 and 2,111 between 1980 and June, 1985*, for a total number of 9,179 units. This represents an increase of 85% between 1970 and 1980, and 29% between 1980 and mid-1985. Derry's increase in single family and multi-family housing supply had the largest increase among adjacent, comparable-sized towns in its region during the 1980-1983 period. (See Table 20.)

Increases in single family homes in Derry were high (approximately 200 per year*), but relatively stable, in recent years. However, increases in multi-family housing have risen dramatically in the last three years. The number of multi-family units built in 1984 and 1985 is approximately 300% - 400% more than the number of single family homes built in this same period. For instance, between 1980 and June, 1985, multi-family units increased

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*Source: Building Inspector's Office.

42%, as compared to the 23% increase for single family homes. Apartment construction has dominated the multi-family housing market, particularly in 1984.

The sewer moratorium imposed by the State in the 70's, and lifted in Derry just before the flurry of building activity makes it difficult to assess this trend. With Derry's limited space left where multi-family housing development would be allowed under the Town's present zoning laws, it is expected that multi-family housing construction will lessen after 1986.

Multi-family housing development has affected another important aspect of Derry's population base. Between 1970 and 1980, there were 3,251 housing units added with a population increase of 7,163 persons. This suggests that approximately 2.2 persons per new dwelling unit were added. (If the estimated figures for new homes added between 1980 and 1984 are considered**, the figures for persons per new unit added decreases to 1.38.) This supports statistics showing smaller family sizes and also supports the fact that apartment and condominium dwellers generally have, initially at least, fewer children.

Houses in Derry today are being occupied by fewer persons on the average than they were in years past. In 1970, Derry's population was 11,712 persons occupying 3,551 households - 3.3 persons per household average. In 1980, persons/household had dropped to 2.8*, based on

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*U.S. Census, 1980

**52 were apartments, condominiums and duplexes.

18,875 persons and 6,653 households. Population and household estimates for 1984 indicate a further reduction in household size to 2.5 persons.

While it is important to evaluate household size when planning for needs of a community's population, it is also important to examine housing use as a part of land use. The Land Use chapter indicates that Derry has consumed 5,210 acres for residential purposes, 4,726 for single family houses, 203 acres for multi-family and 381 acres for two-family. At the current rate of land consumption, all available land for building could be consumed in 30 years.

A determination of housing need is primarily based on an analysis of future population growth and the make-up of that population. Another important consideration is to examine income levels to assure that affordable housing is provided for all income levels in Derry. The following factors were considered to determine projected housing needs:

1. Derry's population is expected to grow at a slightly lesser rate from 1985-1990 than it did from 1980-1985. Estimating a 1986 population of 25,656 people, population is expected to be 30,175 people by 1990, a growth increase of 59.8% over 1980. A slowing of multi-family unit construction is anticipated due to current limitations of available land zoned for such use.

2. National trends, which in the past have led to smaller household sizes, are expected to continue but stabilize in relation to population growth.

3. New housing units added in the form of multi-family dwellings from 1980-1984 suggest a very low occupancy rate (1.4 persons per unit added).

4. The low occupancy rate from 1980-1984 per new unit added is primarily due to the influx of apartment and condominium development. This occupancy rate is expected to increase due to an expected slowing of multi-family housing construction as a result of a decrease in available land zoned for these purposes.

5. If a low occupancy rate of 1.8 persons per new unit is projected for the second half of the 1980's, then the 1990 estimated population of 30,175 people would indicate a need for 6,277 new units from 1980 - 1990. Similarly, at 1.8 persons/unit, an estimated population of 34,000 in the year 2000 would require an additional 5,458 new units between 1990 and 2000. This would result in a total housing supply in Derry of 17,984 in the year 2000 based on current land use regulations.

At a household size of 2.8 persons (1980 Census) Derry needs 4,035 new development units between 1980 and 1990, and 3,508 dwelling units between 1990 and 2000 (using 1980-1986 rate of growth). In either event, Derry's land is being consumed at a rapid rate. This land consumption could be slowed if ordinances are amended to direct and manage such growth.

In 1980, the Town of Derry had 3,318 households (out of 6,622 total*) with an income below $20,000. Thus, approximately 50% of the households fell in the low-to-moderate income bracket. Of the total families (5,013), 274 (or 5.5%) had incomes below the poverty level, based on $13,700 for a family of four. Development of duplexes, apartments, and condominiums also added to the supply of lower priced dwelling units. As 4% of the total families is the regional poverty level, it is evident that Derry continues to provide a fair share of housing needs for low and moderate incomes, as compared to the regional housing market.

Statistics provided by the Housing Committee (See Table 21) also indicate that Derry has below average asking prices for homes compared to six of the seven surrounding towns.

Should Derry continue to provide the same rate of affordable housing as in 1980, provisions for low income families need to be made for approximately 5.5% of the 17,984 total housing-stock anticipated for the year 2000 (or 14,611 at 2.8 persons/dwelling unit).

*U.S. Census, 1980

The Citizens' Questionnaire Survey (see Appendix) indicated that a majority of Derry's residents felt that residential growth should be slowed and that single family housing should be encouraged with mild restrictions while apartments and duplexes should be discouraged. In addition, 95% indicated that Derry should have more stringent codes and enforcement programs to protect the environment.

With recent multi-family housing development, Derry has gone a long way toward meeting the needs for affordable housing. However, in many cases it is the scattered development of single family houses that detracts most from Derry's character. The scattered nature of the developments, the sameness of design, the lack of available public services and, finally, the lack of important public open spaces and highway facilities all contribute to the loss of character.

There are certain measures which can be proposed in a future Land Use Plan and implemented through zoning, site plan review, and other ordinances which would help Derry protect the natural amenities it has left and encourage innovative housing development. As part of the Master Plan process, Derry needs to carefully identify all land which should not be developed because of environmental reasons or for public benefit. In addition, certain areas where services can be easily provided should be designated for appropriate types of development. Conversely, where public service facilities are lacking, the degree of density allowed should be timed to correspond with public service extensions.

Derry still needs to provide a mix of housing types; however, this should not be done at the expense of the environment, traffic circulation, provision of other services, or visual character. Apartments, duplexes, condominiums, and single family homes on small lots should be allowed only in a sewered district in order to

continue to provide for orderly development.

Derry can insure that developments take place where they make environmental and fiscal sense by designating specific land areas for different types of residential, commercial or industrial growth. In addition, Derry should consider various forms of preservation of wetlands, flood plains, high infiltration soils, and unique natural and scenic areas.

Derry can direct and manage growth by adopting regulations that protect the community welfare and, at the same time, encourage innovative design, which assures housing opportunities for all people.

TABLE 19

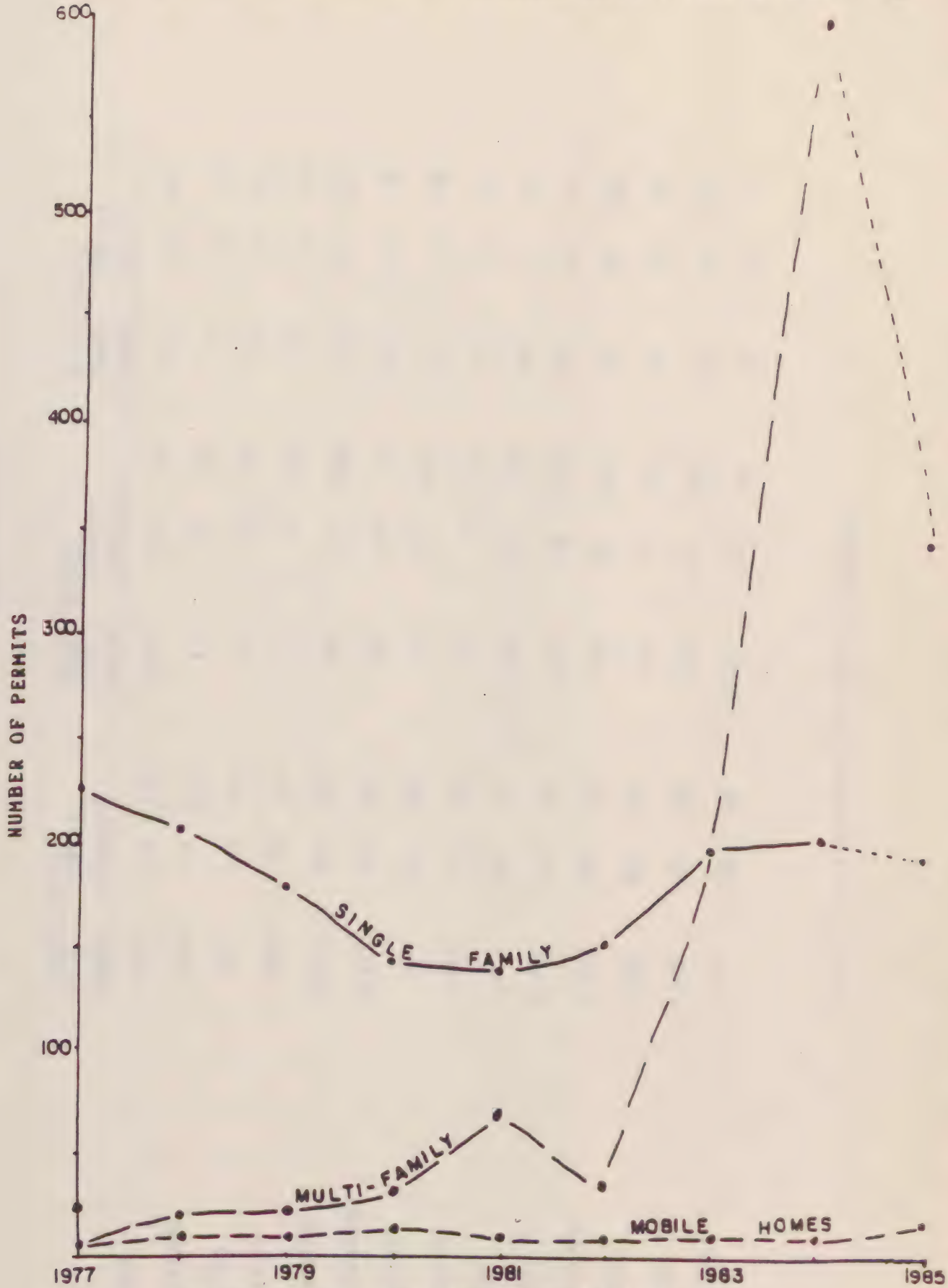
HOUSING SUPPLY, DERRY, NH

Year	Single Family	Multi-Family			Mobile Homes	TOTAL
1970 Census	2,300	1,157			360	3,817
1980 Census	4,055	2,651			362	7,068
		Apt./Cond./Dupl.				
1980 Town	145			32	13	190
1981	140	8		61	8	217
1982	151			36	9	196
1983	203	156		45	11	415
1984	206	300	216	160	11	893
1985*	98	120	18	36	8	280
1980-1985* Increase	943	584	234	370	60	2,191
Total Year-Round Units June 1985	4,998	3,839			422	9,259
1970-1980 Change	1,755	1,494			2	3,251
% Change	76	129			.5	85
1980-1985 % Change	23	42			17	29

*6 Months 1985

Source: 1970, 1980 Census, Town of Derry Building Inspector Reports

FIGURE 4 - ANNUAL ADDITIONS TO HOUSING SUPPLY, TOWN OF DERRY, NH



Source: Derry Building Inspector Records

(1985 Figures are HKA projections)

TABLE 20

DERRY & ADJACENT COMPARABLE SIZE TOWNS
Increase in Housing Supply 1980-1983

	Single Family			Multi Family			Mobile Homes		
	1980 units	1980-83 increase		1980 units	1980-83 increase		1980 units	1980-83 increase	
DERRY	4,055	616	15%	2,651	529	20%	362	36	10%
ATKINSON	1,249	105	8.4%	179	0	0%	0	0	0%
AUBURN	849	116	14%	64	0	0%	23	5	22%
CHESTER	604	22	4%	35	4	11%	16	0	0%
HAMPSTEAD	1,136	149	13%	106	61	50%	77	23	30%
LONDONDERRY	3,169	391	12%	949	84	9%	463	34	7%
SANDOWN	649	151	23%	15	25	167%	72	9	13%
WINDHAM	1,648	312	19%	78	3	4%	0	0	0%
SALEM	5,805	271	5%	1,974	141	7%	646	3	.5%
EXETER	2,355	125	5%	1,314	148	11%	737	30	4%
MERRIMACK	4,147	459	11%	238	398	167%	107	30	28%
BEDFORD	2,688	328	12%	145	18	12%	14	0	0%
HUDSON	3,420	309	9%	828	298	36%	121	14	12%
CONCORD	5,774	236	4%	5,589	231	4%	737	10	1%

Source: New Hampshire Office of State Planning

TABLE 21

LISTING PRICES - DERRY, NH

July, 1985

Town	Median Price	Median Real Estate Taxes	# Houses on the Market
Derry	$136,100	$1,921	52
Salem	131,700	1,683	43
Londonderry	138,400	2,497	33
Hudson	147,200	2,664	3
Atkinson	152,700	2,387	6
Hampstead	154,600	1,793	12
Chester	173,900	2,099	5
Windham	193,000	2,165	34

Source: MLS Listing Book, 7/85

HOUSING PLAN

At a projected growth rate of 59.8%, based on current planning and land use regulations, Derry's population is estimated to be 30,175 residents by 1990. (See page 33, Derry Population Growth.) Further population projections in this Master Plan document indicate that the population may reach 40,000 by the year 2000. This would require an increase of between 7,543 and 11,735 housing units for the twenty years 1980-2000. The projected increase per decade in total number of dwelling units is considerably greater than that for the decade 1970-1980, which was 3,251 units.

The proposed Land Use Plan makes provision for orderly residential growth in the community, assigning priority designations for areas of development by establishing different density patterns. The total land area within the community and the densities recommended in the Land Use Plan can more than accommodate the projected population increase. The Land Use Plan makes provision for various modes, types and densities of housing, thus affording an opportunity of choice of environment and housing cost.

A community must recognize the necessity for accommodating the housing needs of low and moderate income families. In 1980, 5.5% of Derry's families fell below the poverty level. To continue meeting the demand for low-to-moderate income housing, the community has, in the past, undertaken the following measures:

1) An amendment to the zoning ordinance which allows mobile homes and manufactured housing to be accommodated in residential subdivisions throughout the community. Previous to the amendment, mobile homes were permitted only in mobile home park districts.

This change affords developers the opportunity to locate mobile homes and manufactured housing in areas in the community that are suitable for such development. The Land Use Plan now recommends implementation of a "Housing Plan" by designating those areas that are in high-density residential, medium-density residential, and low-density residential with off-lot sewer and water facilities for low and moderate income housing opportunities.

2) Through the Derry Housing Authority, Derry has made available grants, loans, and rent subsidies to low and moderate income families. Of particular note is the Town's effort to upgrade substandard mobile home units and their surroundings.

3) A large number of families and households in the low-to-moderate income range are elderly. Derry's efforts to accommodate housing for the elderly, through a subsidy program in the downtown area, demonstrates Derry's desire to provide housing for the needy. It is proposed that this program be continued and expanded as the Town's population matures from child-bearing to retirement age.

As a new measure - if and when affordable housing becomes a further public issue - the Housing Plan recommends an incentive program to developers in the high-density and medium-density residential areas to allow additional bedroom units per acre if housing for low and moderate income families will be accommodated. Such an incentive program could include an increase in densities or public subsidies in order to reduce development costs and lower the per unit cost, making housing available and affordable to families with income in the low and moderate range.

Derry has, in the past, made provisions through the marketplace to create opportunities for low and moderate income family housing. It should not be the intent of either the Land Use Plan, zoning, or other ordinances and regulations to reduce these opportunities. It is the intent of the Housing Plan, ultimately by its implementing measures, to create incentives and opportunities for meeting housing needs for young families, low and moderate income families, and the elderly. It is important that this be accomplished without sacrificing an attractive environment or lowering standards below their acceptable limits. Rather, Derry should allow the marketplace to create these opportunities within the framework of a continuously attractive community, with due consideration being given to special incentives within the broad market of housing development, and, possibly, with public facility subsidies.

SECTION V TRANSPORTATION

Because of its very nature, intracommunity transportation, intercommunity, and regional/interstate transportation is accepted as a public responsibility. This is true, save for strictly abutting traffic that can sometimes be accommodated on privately constructed and maintained roads. In the case of Derry, the Town's responsibility includes 128.32 miles of streets and highways; and the state/federal responsibility within the Town is for 24.91 miles of streets and highways.

In Derry, transportation has taken on a new face. Railroads, once the key transportation link with the outside, have been abandoned; and today, highway-oriented movement of goods and people is the norm.

Road networks influence trends and directions in development. This generalization does not apply to Derry, however. Development has taken place regardless of the adequacies and inadequacies of street links with the major local and interregional highway network. This is one reason why Derry's Master Plan effort must address the appropriateness of streets (i.e., their use, their inadequacies, their designated functions) and do so by planning for access to the various segments of the community with an improved road system. Until then, development should be reduced to a minimum.

1. Street and Highway Use Classification

With the exception of the Interstate and Route 28 bypass, Derry's road network is one that was laid out at a time when the average speed

was between 5 and 8 miles per hour and the modes of transportation were horse and buggy or wagons. While there have been some improvements in surface treatment (from gravel to paved and tarred, plus some realignments), the basic road network in Derry, as historic maps indicate, has changed little over the last hundred years.

In the 1965 Master Plan, it was suggested that adequate rights-of-way and a street classification system be approved and the program be adopted as part of the community's long-range policies. At that time, detailed street standards and highway classifications were also set forth. In addition, several proposals were identified, which included a relocation of Route 102, an extension of South Avenue Extension, and a relocation of Island Pond Road upgrading it from 'town road' to part of the State's secondary system.

The road classification and their standards today, particularly as it applies to road improvement programs to be incorporated with subdivisions as they take place still must be implemented. In fact, as one travels the roads today, the only differentiation between classifications are those between the State's highway network and the Town's highway network, and these differences are sometimes difficult to discern. Also, there is differentiation in funding responsibilities, from local level and compact urban area designations to state highway responsibilities.

The Town of Derry today is undertaking a detailed study of its physical road conditions and developing an improvement program based on use and needs. Such a study should reflect capital requirements that will be necessary to develop a road network capable of handling traffic generated by an ever-increasing demand coming from subdivisions and population growth.

2. State of New Hampshire Classification

There is a second classification, as designated by the New Hampshire Legislature, which categorizes roads by class networks, mostly in order to assign fiscal responsibilities. These are state primary systems (Class I highways), or trunk lines (which includes the Interstate); state secondary systems (Class II highways - which includes such highways as Route 102); Class III highways or recreations roads (none of which existing in Derry); Class IV highways (those within a compact urban area as designated now by the legislature); Class V highways (town and regularly maintained highways); and Class VI town roads (not regularly maintained). In the Town of Derry there are Class I, Class II, Class IV, Class V and Class VI highways. The following Table is a breakdown of the 153.23 miles existing in the Town of Derry as of January 1, 1985.

TABLE 22

Road Classifications
(in miles)

	State Primary	State Secondary		Compact Area	Town Highways	Town Roads	
Class	I	II	III	IV	V	VI	Total
Derry	11.64	13.21	--	36.80	80.66	10.92	153.23
Londonderry	19.15	9.00	--	7.60	114.87	6.30	156.92
Salem	10.84	7.79	--	90.43	35.32	1.06	145.44

Source: NH Department of Public Works and Housing, 1985

Identifiable Needs

a. The adoption of a street and highway classification system based on planned use areas.

b. A unified support towards the Route 102 relocation.

c. The incorporation of the payback-fee system into the subdivision approval process.

d. The coordination of the recently authorized and currently conducted Road Condition and Improvement Program with the Master Planning process.

e. A land use plan that will lessen future road demands.

f. To control access in location of high volume traffic generated.

Traffic Volume

The existing traffic volumes are the direct result of traffic generated in residential subdivisions and the concurrent commercial and industrial development. Many of these conditions were anticipated in 1965. Consequently, they are not a result of lack of planning or poor planning, but a direct result of implementation and poor recognition of needs as far as traffic is concerned. The increase in traffic volume has created a road network that is the major complaint of Derry citizenry; and the congestion and inadequate road design of this network results in accidents, frustration, and undue delays.

The Southern New Hampshire Regional Planning Commission Transportation Study showed that traffic volumes in Derry range from a count of 700 vehicles on Ash Street to 24,300 vehicles per day on West Broadway. The 24,300 vehicles per day average is

nearly as high a count as the 28,000 vehicles on the Interstate north of the Derry exit. The count on Interstate 93 shows that approximately 8,000 vehicles leave the Interstate in order to enter the local road network in Londonderry and Derry. The 30,000 vehicles converging in the center of town are creating local traffic problems of considerable magnitude.

There are additional counts available on Route 28 near the Hood Shopping Plaza - 18,000 vehicles; Crystal Avenue north of Broadway - 16,400 vehicles; and Route 28 north of Ross's Corner - 15,000 vehicles.

The average daily traffic on Birch Street shows 11,100 cars per day and drops off to 6,600 vehicles per day on Rockingham Road. Bypass 28 shows 8,900 vehicles near the Old Manchester Road and 3,300 vehicles just north of the "Circle" (an indication of the diffusion of traffic at Tsienneto Road). Hampstead Road carries 4,300 vehicles east of Adams Pond Road and East Derry Road carries 7,300 vehicles near Cemetery Road. This latter comparison shows the "terminal traffic" located off Hampstead Road east of Cemetery Road.

As a result of the Current Road Condition study, additional counts were taken and are special counts for purposes of use in valuation. The following is a tabulation as furnished by Rodney Bartlett, Director of Derry's Public Works Department:

Location	ADT*
North Shore Road (between Chester & Worthley)	1,058
Rollins Street (200' west of Crystal)	1,845
Highland Avenue (between South Avenue & MacGregor)	1,347
Warner Hill Road (200' south of Hampstead)	650
Old Chester Road (between Young Road & Hampstead)	906
Elm Street (200' north of Broadway)	1,800
English Range Road (near Cove Drive)	2,116
South Avenue (200' west of Birch Street)	3,497

*Average Daily Traffic Source: Derry Road Study, 1985

Mass Transit

There is no public transportation system available in the Town of Derry. This makes the community rely on individualized transportation which has, over the years, led to considerable citizens' complaints about a totally inadequate road network.

Summary

The recently authorized Road Conditions Study is a first step towards remedial measures in overcoming the conflict between land use development and service road access backed by a collector and thoroughfare network.

As the Town of Derry continues to grow, off-site improvements and their considerations should become part of the development approval process. The Town, in its continuing Master Planning efforts, should

ascertain the full impact of land use and transportation coordination and develop a priority system for road and highway improvement programs based on existing deficiencies.

The Governor's Advisory Commission on Highways has not yet found it within the state's need to remedy the nearly intolerable situation existing on Route 102. To continue bringing traffic into Derry without any recognition of the existing problem constitutes neglect by the state and this should be remedied within the ensuing ten year program. Derry should be given the consideration it needs in light of state impact on the local road network. It is also an element that must be reviewed and considered as part of the continuing Master Planning effort by Derry, if for no other reason than to reserve a future right-of-way at this time.

TRANSPORTATION PLAN RECOMMENDATIONS

A town's highway network is often more important to the development of a community than is commonly realized. It governs the patterns of movement for people and goods, adds accessibility inside and outside the town, contributes to the safety and convenience of the community's residents, and strongly affects the success of business and industry. Derry now is following through with the recently completed Road Management Program, and the Town will, in the future, spend considerable capital improvement funds on its highway network. In addition to this, the design and construction of roads and their relationship to underground utilities affect the cost of maintenance of roads and underground utilities.

Often, one can relate the condition of streets and roads to the condition of a town's neighborhood and area. Good, well-kept streets often provide an incentive for keeping up properties, while poor streets are often a contributing element to a property's detriment. The Town's image is also reflected by its roads in other vital ways. Visitors and newcomers (potential residents or investors) often gain their first (and often lasting) impression of the Town as they drive or ride over the roads to downtown or outlying, more rural sections.

Derry's recent growth has taken place around an existing street pattern. It thus became a governing factor in development and the direction of growth for the community; and it has greatly contributed to the community's present pattern. Therefore, it is reasonable to develop a road system for the future that is designed to shape the future community and its layout in general. A road layout not only affords

access, but oftentime governs the size and shape of lots; and it channels growth and regulates location and density of growth through the adequacy or inadequacy of access which is provided.

On a larger scale, the highway system in a town should serve through traffic on a separate basis from local and service traffic. Proper design can eliminate and avoid conflicts between the traffic needs of a community, the region and the State. Through proper planning, street systems can provide a means of coordinating the types of traffic and the land use areas they will serve. It is wise to develop a classification system to provide for a future road pattern that is designed to serve the community and its land use plan. The Highway Plan makes recommendations to upgrade certain existing streets and provide for off-site construction where they become necessary, in accordance with the Highway Plan and appropriate state classification standards. This will give needed, improved access to outlying areas in the community, separate local from through traffic, and identify functions for which the streets are actually designed and built.

Marginal Access Locations

For purposes of accommodating high traffic generators on existing roads, access should be controlled through site plan administration. The Master Plan has designated those critical as areas in need of "marginal access roads".

Proposed Street Classification System

The system was developed, in part, in consideration of the recently-completed road management program. In it, five classifications were established. However, this seems to be excessive, taking into consideration Derry's projected densities and needs to the year 2000; and a modified highway classification has been established. The proposed classification system includes:

1) Service Roads,
   designed primarily to serve abutting properties.

2) Collector Streets,
   designed to handle heavier traffic volume than service roads, and carry up to 5,000 vehicles per day, depending on their function and location; can serve abutting properties, but their primary function is to link service roads with arterial highways.

3) Arterial Roads,
   designed to carry traffic in excess of 5,000 vehicles. (In some instances, such as Broadway, these roads are already carrying approximately 25,000 vehicles annual average daily traffic.)

This recommended classification system ties in with the Town's subdivision regulations which have set forth arterial streets, collector

streets, and minor streets together with their recommended standards.

It is recommended that the following roads be designated as:

ARTERIAL* (25.2 miles):

1) Tsienneto Road, 2) Folsom Road, 3) a portion of No. High St.,* 4) Hillside Avenue, 5) Dickey Street and Valley Street, 6) Aiken Street, 7) South Avenue to Birch Street,** 8) Birch Street, 9) Manchester Road, 10) Rockingham Road, 11) East Broadway, 12) West Broadway, 13) Route 28 & Route 28 Bypass, 14) Hampstead Road, and 15) Route 102 - Chester Road.

COLLECTOR (27.5 miles):

1) English Range Road from Route 28 Bypass to Pingree Road; off-site location paralleling English Range Road and No. Shore Road to Cross Road (app. ½ mile), 2) Cross Road, 3) Adams Pond Road, 4) Floyd Road; off-site location improvement between Floyd Road and Lawrence Road; off-site location improvement between Lawrence Road and Frost Road crossing Londonderry Turnpike, 5) Frost Road, 6) Island Pond Road, 7) Brandy Rock Road, 8) Gulf Road, 9) Loop to be established for relief of traffic circle, consisting of western portion of Island Pond Road and Cemetery Road, with off-site improvement between intersection of Island Pond Road, Cemetery Road, and Pond Road, 10) Olesen Road, 11) Olesen Road Extension to Island Pond Road, 12) Warner Hill Road, 13) Bartlett Road, 14) Kendall Pond Road, 15) Fordway Extension & Fordway, 16) Windham Road, 17) Pingree Road, 18) Old Auburn Road, and 19) Back Chester Road.

The remaining roads are classified as service roads (89.6 miles).

Bypass 102 consideration

Over 20 years ago, a bypass was under consideration. It is still an issue. It is particularly so because of the unprecedented growth that Derry has recently experienced and because a State Highway

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*See Transportation Plan Map.

Route 102 is serving a large portion of the southeastern New Hampshire area of growth. It is again recommended that the Town of Derry seek State participation towards the relief of Derry's heavy congestion along Broadway and towards the resolution of the inadequate road network that 102 renders. It is recommended that the Master Plan incorporate a combination of Alternate 1 and 2 of the SNHRPC Transportation Plan for Derry for incorporation into the State's Highway Improvement Program and the Town's Master Plan.

The Transportation Plan includes recommendations that the Town initiate action on Phase I by improving Hillside Avenue and linking it with North High Street then embarking on improvements for Ross's Corner, Folsom Road, and Tsienneto Road.

Phase II of this program would be the provision of an interchange with 93 and the 102 Bypass started under Phase I. (This differs somewhat in detail from the Transportation Plan recommendation prepared in 1985 by the Southern New Hampshire Planning Commission.) In principle, it supports the Town's initiative for long-range improvements on the Bypass with a recommended $3.5 million in Town and State funding program.

Phase III would link Route 102 with Interstate 93 via a new interchange in Londonderry.

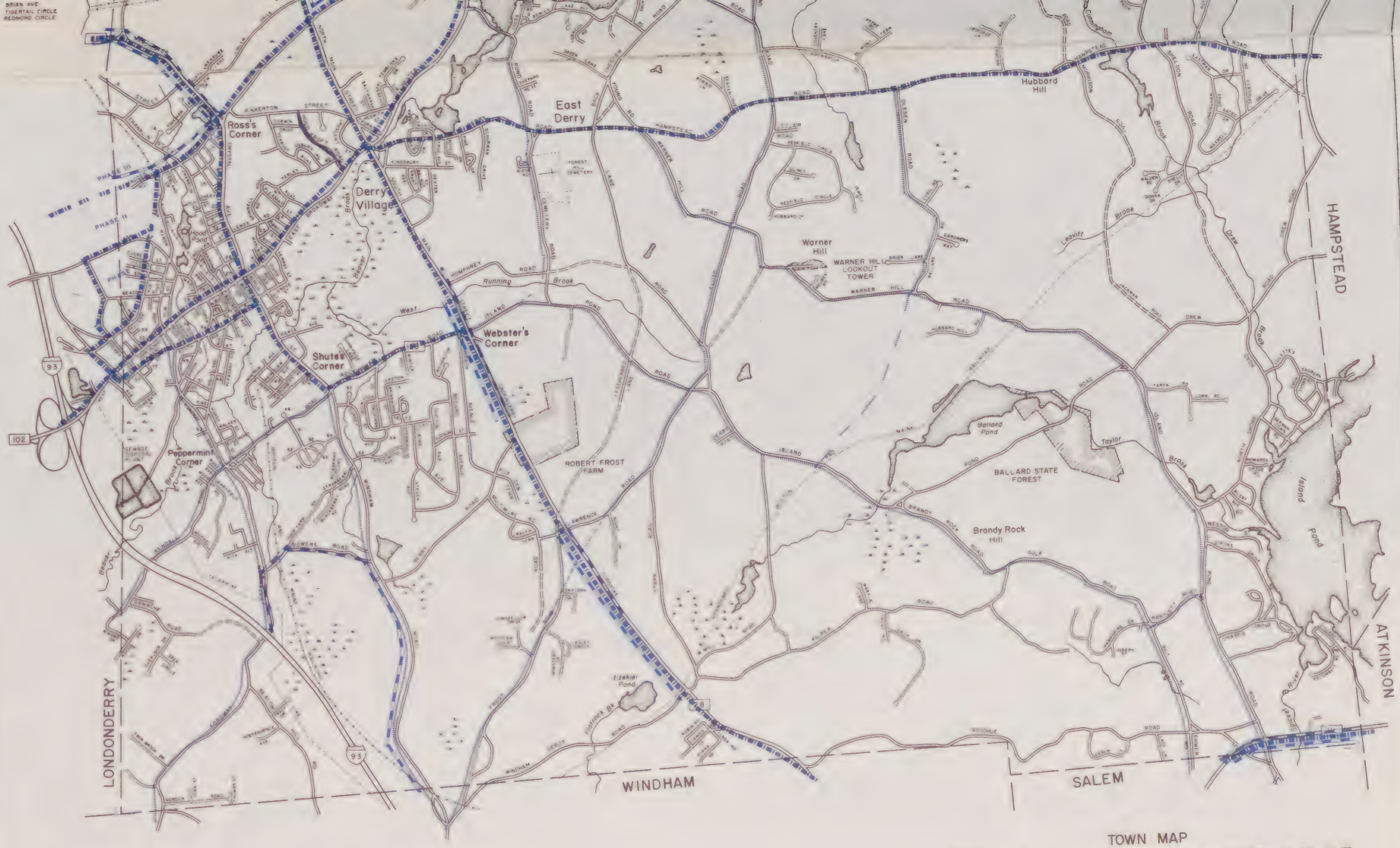
Street Construction Standards

It is recommended that the Planning Board require, where appropriate, increased standards for collector roads, particularly on off-site locations. As the Planning Board begins to consider impact fee requirements as part of subdivision approval minimum standards as set forth in subdivision regulations Section 4:1A14a-v should be amended to increase the collector street width requirements to 66 feet, to require additional rights-of-way for intersections between collector streets and arterial streets in order to facilitate turning movements, and to require sidewalks on one side of all collector streets.

Scenic Roads

In keeping with the community goal to retain a "small-town" atmosphere, those roads still scenic and beautiful should be preserved. Such roads as Drew Road, portions of Cemetery Road, and Kilrea Road are just as scenic as Stark Road, English Range Road, and Mill Road. It is recommended that the Town Council establish a Scenic Roads Committee whose charge it will be to identify scenic roads and vistas. The Council should then review the recommendations and, if appropriate, adopt measures for the protection of these roads and vistas through easements, setbacks, and/or landscaping requirements along these roads.


AUBURN
CHESTER
LONDONDERRY
SANDOWN
N
1 ELAINE AVE.
2 ELEANOR AVE.
3 OPAL DRIVE
4 GREGOIRE ST.
5 DRIFTWOOD RD.
6 GREENWICH RD
7 LONDON RD.
8 KENRO WAY
9 ZAMES ST.
10 COLE AVE.
11 LAKE SHORE AVE.
12 GRANDVIEW AVE.
13 INDUSTRIAL LN
14 LARAWAY CT.
15 CONCORD AVE
16 MANCHESTER AVE.
17 CLAREMONT AVE.
18 LACONIA AVE
19 BERLIN ST
20 LINCOLN ST.
21 HOWARD ST.
22 LAUREL ST
23 MOODY ST.
24 MT. WASHINGTON ST
25 HARDY CT.
26 PEARL ST.
27 MC ALLISTER CT
28 PILLSBURY ST
29 WALKER CT.
30 JEFFERSON ST
31 LINWOOD ST.
32 WYMAN ST.
33 LINDEN ST.
34 LAWRENCE ST
35 CLARK ST.
36 VALLEY ST.
37 WEST EVERETT ST.
38 DESMARIAS AVE.
39 CENTRAL ST.
40 SAWYER ST
41 ABBOTT CT.
42 CENTRAL CT.
43 MERCHANT'S ROW
44 NORTH AVE
45 SOUTH RAILROAD
46 ALADDIN CIRCLE
47 MC GREGOR ST
48 SEVERANCE ST
49 UNION ST.
50 BRIDGE ST.
51 FLORENCE ST.
52 LOWELL ST.
53 SUNSET CIRCLE
54 WOODLAND AVE
55 SUNSET AVE
56 BUZZY LANE
57 DRURY LANE
58 MARK STREET
59 ESCUMBUIT AVE.
60 TAYLOR BROOK LN
61 PHILIP ROAD
Upper Shields Pond
Lower Shields Pond
Beaver Lake
Adams Pond
Moore Hill
Butman Hill
Eastman Hill
Brook
ROAD
WALNUT
HILL
121



TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

SECTION VI UTILITIES

Sewer Services

Even prior to 1920, the Town of Derry provided a sanitary (although combined with storm water) sewer system. When the initial treatment facilities were installed, it expanded this system . By 1975 approximately 6,200 of the total population was connected to sanitary sewer. Since then Derry's growth has taken place in the outlying and rural areas; and presently approximately 11,000 of Derry's population is being served by private and/or individualized septic tank and sewage disposal facilities.

Public utilities in Derry have been continuously updated, renovated and replaced to bring the system up to date. The treatment facilities presently treat an average of 1.5 million gallons of waste water discharge daily. With the additional Environmental Protection Agency ("EPA") funded lagoons, the Town's treatment capacity will be increased to an average daily capacity of 4.2 million gallons per day. Peak flows in the spring sometimes result in infiltration and inflow into the system of up to 4 million gallons per day. With the expansion, 4.2 million gallons per day can be treated; and the system can be expanded into areas of dire need by extending trunk lines and interceptors into areas presently experiencing sewerage need. The Town is presently operating with two major interceptors in the Horne and Beaver Brook basins. These are capable of handling additional services and laterals once the treatment facilities are expanded to assume greater waste water flows.

Since the preparation of the 1976 and 1977 studies, the Town of Derry has increased by approximately 8,000 people. Many of these are not served by a public sewer system. However, long-range planning efforts should take into consideration the coordination between land use and facilities planning. This coordination is necessary to maintain a sanitary environment and to provide for densities commensurate with systems capability.

Water Services

The serviced portion of the Town of Derry today consumes approximately 1.3 million gallons of water per day. This water supply comes from the Manchester Water Works as a result of a recently- negotiated contract. This assures the Town of an adequate water supply in terms of quality and quantity. A recently-constructed stand pipe provides an additional two million gallons of storage and pressure facility in the north end of the system. This two million gallon stand pipe is in addition to the half-million storage tank east of Route 128 Bypass in the vicinity of Pembroke Drive. The Derry water system is continuing, under the new Public Works Department, to update the water system and increase the size and the pressure in order to increase residual flows. The current contract allows the Town to draw 2.1 million gallons/day from the Manchester Water Works. A potentially new source is being investigated by Manchester Water Works to further ensure adequate supply for the future.

Private Water Systems

The Town of Derry today, in addition to its Water Department, has 26 individual water systems that come under the jurisdiction of the Water Supply and Pollution Control Commission of the State of New Hampshire. Many of these are franchised water systems; some are association water systems; some are private water systems. They include such water systems as Maple Hill Acres, Oakwood Terrace, Old Crest Estates, Redfield Estates, the Damren Road Condominiums, Farmstead Acres, and such small individualized systems as Kiwania Day Camp, Robert Frost Farm and Nancy Webster's Kindergarten. Overall, there are 26 individual systems throughout the community of various sizes, various numbers of customers, and mains of various sizes (most under 4" in size)*.

Utilities Needs

1. The need to coordinate land use and Master Planning efforts with those of Derry's Water Department. The need to coordinate the Highway Department's reconstruction programs with water line updating and upgrading.
2. The need to identify individual water systems and their:
    a. storage,
    b. size lines,
    c. capacity, and
    d. source and flow.

*State of NH Water Supply Pollution Control Source (Summer, 1985).

UTILITY CONSIDERATIONS

1. Derry's Water System Plans

The Town of Derry does not have, as some communities, a water supply shortage because of its contract with Manchester. It does, however, have identifiable deficiencies within its system. The ever-increasing population has not taken place without incurring tangible problems that need to be addressed, particularly in the service area within the water system . Problems within the water system are two-fold. The first problem is the need to expand the water system into additional areas, and the second is to overcome the deficiencies of residual pressure resulting from inadequately-sized transmission mains and insufficient water pressure for some areas because of the low stand pipe elevation.

Recognizing these deficiencies, the Town of Derry has, through its Public Works Department and Mr. Alan Swan, Utility Coordinator, carried out studies with the assistance of a consulting engineer. These studies have pointed out several identifiable problems and suggest recommended solutions.

Specific areas of concern are Sunset Acres, the South Range School area, and the development around Tiger Tail Circle. These areas have, at best, 30 lbs. of static pressure. During heavy demand periods, this pressure will be insufficient due to inadequate surface elevation. The elevation of the reservoir at 421' and an elevation of 350'-360' for water demand areas, coupled with the distance and resultant friction, produce residual pressure inadequate to serve

these areas in times of need. According to the engineer's report, a fire flow at the Fairways would result in a -0.96 PSI at the South Range School, -11.8 PSI at Tiger Tail Road. While a fire flow location at Hood Junior High would result in 14.7 PSI, and at the South Range School and Tiger Tail Circle it would result in 10.7 PSI. Since twenty PSI is the acceptable minimum residual pressure, it leaves these areas in considerable undersupply.

In addition, areas located east of the line of Crystal Avenue and Birch Street are identified as critical areas. These include Sunset Acres, the Hood Junior High School area, the Fairways development, and the areas above Hillside Estates development, the Hospital, and fire flow along Fordway and portions of West Broadway.

Water System Improvement Recommendations:

The consultant agrees with the water improvement recommendations stated in the January 30, 1986 letter from DuBois & King, Inc. of Concord, NH. An excerpt of this follows.

> "These (proposed) water main improvements, in themselves, would increase the flow capacity. In order to ensure residual pressure, particularly at increased elevations where development is now taking place, a standpipe off Brady Avenue is essential. Such a standpipe would not only increase the fire flow in the southwest quadrant of the service area of the water system, but it would extend the service area and would particularly aid the system to ensure water supply for present and future needs. As indicated in the engineering report, this would facilitate a service elevation to between 300' and 400'. This generally is that area proposed for medium density, high density, urban density and industrial and prime commercial development for the Town of Derry."

RECOMMENDED IMPROVEMENTS TO THE DERRY MUNICIPAL WATER SYSTEM*

1. Replace the 6" line along South Main Street between Kingsbury Street and Dexter Street with a new 12" line. This will provide a continuous 12" main from Chester Road to Fairways.

   Estimated Length: 1,750 Feet

2a. Add a 10" line along Hood Road, from East Broadway to Perley.

   Estimated Length: 850 Feet

2b. Add an 8" line along Perley, from the end point of the existing 8" line to Hood Road.

   Estimated Length: 150 Feet

2c. Add an 8" line along Lenox Road, from the end point of the existing 6" to Hood Road.

   Estimated Length: 150 Feet

2d. Add a 12" line along Hood Road, from Perley to Grinnell Road.

   Estimated Length: 550 Feet

3a. Replace the existing 4" and parallel the 8" line along Oak Street, from East Broadway to Wilson Avenue, with a new 12" line.

   Estimated Length: 1,150 Feet

3b. Add a 12" line cross-country from Wilson Avenue to the intersection of Pierce Avenue and Parkland Drive.

   Estimated Length: 1,000 Feet

3c. Add a 12" line cross-country from Pierce Avenue and Parkland to the north end of Sunnyside Lane.

   Estimated Length: 1,650 Feet

4. Add a 16" line along Sunnyside Lane from Rockingham Road to the junction of the two cross-country lines. The existing 8" line along Sunnyside Lane would remain in place.

   Estimated Length: 850 Feet

*Source: Dubois & King report, March, 1986.

2. Derry's Sewer System Plan

Town planning, particularly in urbanizing areas, provides the opportunity to coordinate public water supply and public sewer services. It is a good policy, before a public water system is installed (or in conjunction with the water system), to have a public sewer system established. Because people can draw more water through a public system, the increased wastewater discharge from households and businesses is not only noticeable, but significant. Individualized septic tank facilities are then prone to be more overburdened and inadequate, resulting in unsanitary and unhealthy conditions.

The Town of Derry's recently funded program to develop two new lagoons and have them operable by late 1987 provides for an additional 3.1 million gallons a day of discharge to be treated. This would give the Town an overall treatment capacity of 4.0 million gallons per day. It must be recognized that not all of this is wastewater, but some (up to 5% - 10%) would be infiltration and stormwater inflow. This new addition would mean that the Town would nearly triple its capacity to treat its wastewater, from the present daily average of 1.2 million gallons to approximately 4.2 million gallons per day. While present plans would provide for the basic installation of the treatment facility, there are ancillary improvements necessary. In addition to interceptors, trunk lines, and lift stations, it will require an increase in pumping capacity between the lagoon systems and the Merrimack River.

Many of the improvements now being carried out are in conformance with the Wastewater Treatment Works Plan for the Public Works Department drafted by Environmental Engineers, Inc. in 1976. In addition to authorizing the construction of the two additional lagoons,

the Town has now undertaken measures to reduce inflow and infiltration of stormwater into the sanitary system. This has slightly increased the Town's capacity for wastewater treatment.

The Town, continuing its follow-through of recommendations in the 1976 study, now is programming plans for the incorporation into the sewer network of the area north of Berry Road, which includes the Sunset Acres area, and those areas adjacent to and west of Windham Road located north of Bowers Road. Additionally, it plans to include Service Area 11 (northern area including East Derry and adjacent to Hampstead Road) and Beaver Lake and its general drainage basin. These were the priorities recommended in 1976 and to be carried out between 1980 and 1990.

One significant area missing is the area north of Ross's Corner, west of Bypass 28, and east of Route 28. It is the area that falls within the Shields Brook drainage basin and surrounds the powerlines in the vicinity of Scobie Pond Road. For land use planning purposes and purposes of incorporation in the Master Plan, this consultant recommends that this area be considered of the highest priority to lay the ground work for the Town's economic development endeavors.

3. Other Considerations

The Town does have within its boundaries several privately franchised water systems. These have been, to some extent, acquired over a period of time by Southern New Hampshire Waterworks. This acquisition program will result in franchises for portions of the Town of Derry. There are proposals underway for establishing a separate water system with individual private water systems under the auspices of Southern New Hampshire Waterworks. In particular, a higher ground

elevation that facilitate an enlarged service area and service quality, especially in the north-easterly portion of the community. Such a measure should be taken into consideration in the formulation of Plan recommendations, particularly where off-lot water services are concerned. Again, it must be kept in mind that the provision of water is only one aspect of community services and utility services. There are other services that are necessary to support increased high density developments, especially wastewater.

For short range considerations, the Town is well advised to prevent premature developments that would result in inadequate treatment capacities for wastewater by the Town. Until such time as this situation has been remedied, in fact, the currently proposed moratorium by the Town appears to be a good measure.

4. Proposed Service Areas and Priorities

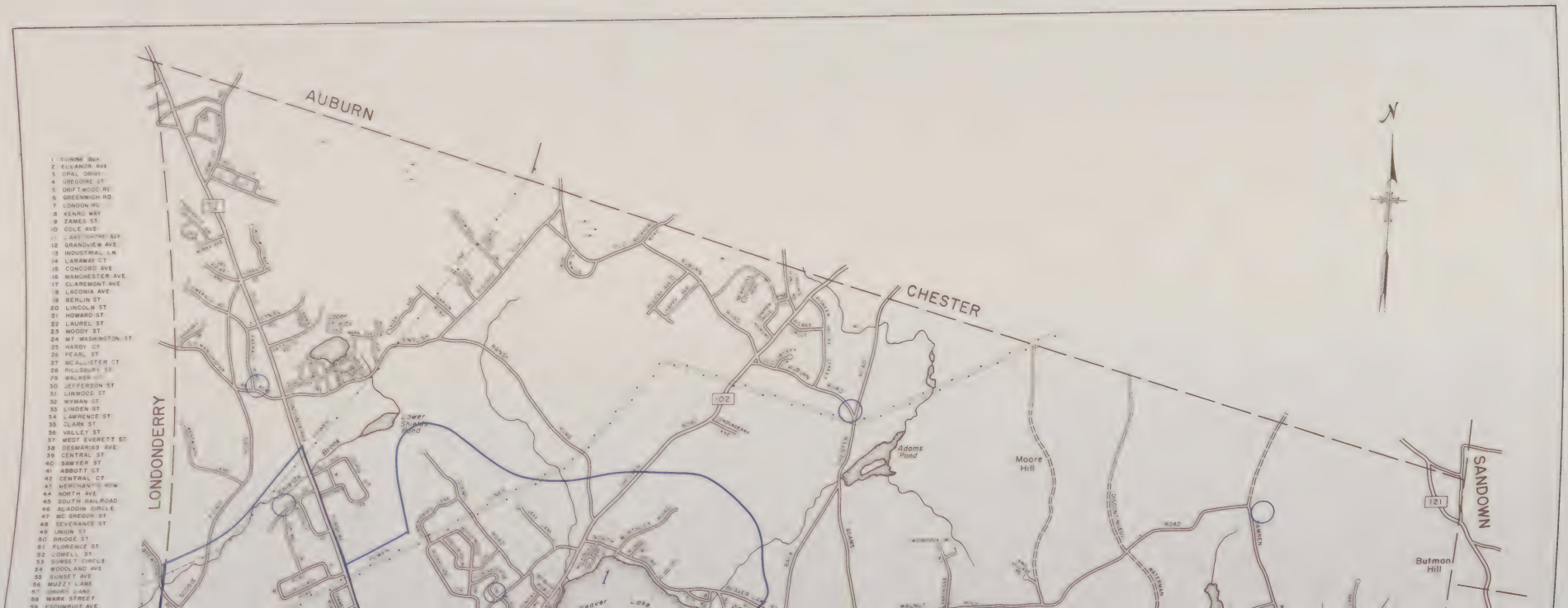
The Town's Facility Planning Study, prepared in 1976, indicated various areas to be served by a public sewer system. These areas were identified by Priority 1, 2, and 3. Priority 1 was proposed for 1980-1990; and Priorities 2 and 3, between 1990-2025. Consideration of this Comprehensive Plan Study and its impact on future land use decisions must also incorporate those areas of highest priority to be serviced. These areas include the following and are shown on the Utilities Map:

1. The Beaver Lake area,
2. Derry Village between Beaver Lake and the Traffic Circle,
3. East Derry (that area near the library and the East Derry Fire Station),

4. The development area in the southern portion of Derry, bounded by Windham Road to the west, Berry Road to the south and Route 28 to the east,

5. The area north of the existing Industrial Park on Manchester Road, Route 28. This includes Franklin St. Extension, lower portion of Scobie Pond Road, and the identified "Industrial" area on the Proposed Land Use Map. (Considered High Priority because of its industrial development potential for economic growth.)

(The Planning Board proposes these improvements to the Town Council for incorporation in the Capital Improvement Program and Budget process and overall Sewer Improvements Program, scheduled to begin between 1986-1990.)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25 HARDY CT
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27 MCALLISTER CT
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30 JEFFERSON ST
31 LINWOOD ST
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38 DESMARAIS AVE
39 CENTRAL ST
40 SAWYER ST
41 ABBOTT CT
42 CENTRAL CT
43 MERCHANTS ROW
44 NORTH AVE
45 SOUTH RAILROAD
46 ALADDIN CIRCLE
47 MC GREGOR ST
48 SEVERANCE ST
49 UNION ST
50 BRIDGE ST
51 FLORENCE ST
52 LOWELL ST
53 SUNSET CIRCLE
54 WOODLAND AVE
55 SUNSET AVE
56 MUZZY LANE
57 UNION LANE
58 MARK STREET
59 FOUNTAIN AVE
Lower Shields Pond
Adams Pond
Moore Hill
Butman Hill
102
121

UTILITY SERVICE AREAS

- Water service only
- Sewer service only
- Water and sewer service
- Private water systems
- Future Service Area (By Year 2000)

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

SECTION VII COMMUNITY FACILITIES

The following is an inventory of community facilities for the Town. The study includes public improvements, buildings, and lands.

Town Offices

The former U.S. Postal Service Building accommodates the Mayor's Offices and some administration offices. This structure is located in the center of Town at the corner of Broadway and Crystal Avenue and serves the Town well, considering that the building was originally designed for a different function.

However, several municipal functions are carried out elsewhere. Public Works is located at 40 Fordway, as is the Building Inspector's Office, Department of Health Office, the Code Enforcement Administration, Electrical and Plumbing Inspection Office, and the Office of Planning. These services are also carried out in a building that was designed for other purposes.

The Town relies on the Adams Memorial Building to provide meeting room facilities, which means "doubling up" with others; and recreation has its headquarters at the West Side Community Center (soon to move to the Veterans Memorial Hall).

Municipal Court

The Municipal Court is housed in the historic Adams Memorial Hall. This is located on Broadway and, with some adaptation and renovation, is serving well. It is evident, however, that changes have been made at Adams Memorial Hall; and there should be an evaluation relating the

adaptations of this historic structure to continually changing governmental use.

Police Department

The Police Department (one of the praised municipal services in the community per the Citizen's Survey) has recently moved to a modern, up-to-date and adequately-sized facility at a location near Ross' Corner. It provides 24 hour service and, with the excellent communication facilities located there, Derry is well provided for.

Fire Protection

Fire protection in Derry consists of the central fire station, located on East Broadway, and the original fire station, located on West Broadway in the center of West Derry. Facilities and men are also provided at a station located on the corner of Warner Hill Road (Island Pond Fire Station). Fire protection has recently been placed under Town Government as a Fire Department. This department performs an excellent function in the community with a well-trained staff as indicated in the recent Citizen's Survey.

In addition to the Fire Department mentioned above there is the East Derry Fire Department full-time fire protection service located in East Derry on Hampstead Road.

Ambulance Service

Derry Ambulance Service is capable of providing a level of Advanced Life Support. It has trained paramedics on duty 20 hours/day.

Rescue Squad

Derry's Search and Rescue Squad is equipped to handle underwater rescue and ambulance and rescue services.

Communications

The Fire Department and Ambulance Service are linked with a 24-hour communications system in the alarm room at the central Fire Station. This dispatching service serves the Town of Derry and renders ambulance communication for Londonderry, fire and ambulance communication for Chester, and fire, ambulance and rescue for Auburn and for Hampstead.

Public Works Department

The Public Works Department is responsible for the maintenance of streets, sidewalks, sewerage (including the treatment plant), water system, parks, cemeteries and parks. Headquarters are located at Fordway, as is the equipment garage and maintenance facilities. This location also provides for salt storage, sand storage, and storage of culverts, pipes, etc.

The Public Works Department is also responsible for the solid waste disposal. It is now in the process of closing the landfill, supervising and monitoring maintenance in the meantime. Alternate means for solid waste disposal are presently being planned. This would provide for a refuse-to-energy incineration plant privately constructed and used by Derry on a contract basis. The planned location for this facility is near the Town's sewage lagoons off Fordway.

Town Libraries

The Public Library is located on Broadway and is rendering the community a service that needs to be improved (even with Taylor Library) because of the influx of population.

Derry has a shortage of space which needs improvement. Based on the librarians' and Trustees' assessments of townspeople's demands, additional volumes and space to house these volumes, additional meeting room facilities, and approximately 15,000-20,000 square feet of additional space are a necessity. This need is now under study by the Library Trustees.

School Facilities

Derry's school facilities (under the auspices of the Derry School District) consist of:

- The Derry Village School (capacity of 600),
- The Floyd Elementary School (capacity of 160),
- The Grinnell School (capacity of 600 by Fall, 1987), and
- The South Range School (capacity of 425).

  In addition, there is
- The Hood Junior High School (capacity of 800-850).

The 1984 report of Mr. Brown, Superintendent of Schools, indicates a tangible shortage of classroom space on the local level. Overall, in 1984, the Town had a tangible shortage of classrooms, which, combined with rising population growth, will worsen. Therefore, the voters in 1985 have authorized construction of a new elementary school facility in the central portion of the community.

While this construction will resolve the immediate needs on the elementary level, Pinkerton Academy is in need of help in meeting the high

school enrollment needs of the community. Pinkerton Academy is a private educational facility, contracted by the Town of Derry and adjacent communities. Here, too, a shortage of classroom space is evident, and this need must be addressed. The contract is up for negotiation; and as the Citizens' Survey indicates, there is a general satisfaction with Pinkerton Academy's performance. Pinkerton Academy should address the classroom shortage in order to continue to provide excellent educational services to the Town of Derry and its residents.

Community Facilities Needs

1. Town Office Facility - There is a need for a municipal administration facility. This facility should be adequate to house a council chamber, administration offices, and committee and citizens meeting rooms. A continuing Master Planning effort should aid, not only in the evaluation of the municipal building needs, but with a study of location for a government center for the Town of Derry.

2. Adams Memorial Hall - This historically significant hall, which has adequately served the community for decades, has continued this service since its restoration after a devastating fire. With adaptations it could serve as a community center, courthouse and site for historic artifacts. Its location and unique architecture favor these improvements.

3. Public Works Department - Presently, the Town of Derry is operating an important governmental function out of facilities that are

outdated and costly to maintain, and operate. There is a need for modernizing the Public Works headquarters, not only the garage and maintenance building, but the offices as well.

4. Town Libraries - On recommendations from the Librarian and the Trustees and observations made by this consultant, the Town Plan proposes to incorporate actions to solve the need for new or expanded library facilities and functions.

5. School Facilities - While the Town of Derry has recently authorized the construction of a new elementary school, the need for expanding its secondary school facilities under a contract with Pinkerton Academy should receive early and prompt attention.

Citizens Response to Questions Regarding Community Services and Facilities

The citizens' ratings regarding the adequacy, or the lack thereof, of community facilities and services in response to the recent Citizens' Questionnaire Survey can be found in the Appendix.

COMMUNITY FACILITIES PLAN

A. Schools

This consultant has reviewed, with members of the Committee and Superintendent Brown, the Building Needs Committee Report of 1984. That report evaluated the adequacies of present facilities, incorporated standards developed by the School Board, and developed and provided from this, based on School enrollment projections, additional classroom and central facility needs. The recommendations set forth were based on an analysis of space problems, present and future needs determined through enrollment projections, and the determination to "furnish economically realistic, long-range solutions to the school problems".*

The following aspects were addressed:

1) Land acquisition,
2) Current building and land use, and
3) School enrollments and projections.

The recommendations to be incorporated into the Master Plan, based on projected enrollments and capacities, include construction of the following:

1) A new 600 seat elementary school with appropriate central facilities,
2) A 300 seat addition to the Grinnell School, and
3) A 600 seat middle school in the long-range picture by approximately 1993.

In addition, the Needs Committee recommends that "four existing

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*Source: Building Needs Committee Report, 1984.

elementary schools and Hood Jr. High be upgraded over the next six years in such a way that classroom and core facility capacity be approximately matched." The Committee further recommends:

1) "Enlargement of Grinnell cafeteria and kitchen to meet the needs of an additional student capacity.

2) Reduction of classroom capacity by appropriate number in the Derry Village School and South Range School in order to expand core facilities and/or address the need for space for art, music and special services.

3) Reduction of classroom capacity by one classroom, and possible modification of educational program at the Floyd School.

4) Reduction of classroom capacity by seven classrooms, which is the present sixth grade at Hood Junior High School, in order to expand core facilities, i.e., shop, home economics, music and computer facilities."

The following three-phased program is recommended by the Needs Committee. This consultant has reviewed these needs in light of population projections for Derry, present and future land use plans for the Town of Derry, and population projections in light of family and household size for Derry.

Phase I: Construction of a new 600 pupil elementary school. (Now completed.)

Phase II: Construction of a 300 pupil addition to Grinnell Elementary School (under construction).

Phase III: Construction of a 600 pupil middle school by 1993, provided school projections hold true.

The proposed Land Use Plan incorporates these recommendations and makes provision in the Land Use Plan for recommended future

school sites in conjunction with a public lands program and neighborhood community development approach.

It is imperative that both the Planning Board and the School Board correlate their efforts in order to assure that neither over-building or a long-range shortage occurs. This will require the continued review of population projections, household sizes, and building activity in the Town of Derry. On review, at present, it appears that population projections and school enrollment projections are realistic and should hold true until the mid-90s.

B. Public Safety

Fire Protection Considerations

Derry's two-tier approach to rendering fire protection and ambulance service to the community has provided the Town, in the past, with one of the best fire protection services among New Hampshire communities. As with many other community services, however, fire protection will be subject to additional needs as developments take place, commercial and industrial expansion occuring west of the Bypass and scattered residential development occuring throughout the community.

Fire Department

Derry's central fire station and substation on West Broadway and Warner Hill Road near Island Pond are rendering services to the west and south portions of the community. This has proven to be adequate in the past. However, foreseeable residential and commercial expansion, particularly along the Londonderry Turnpike, will call for additional fire station needs. It is therefore recommended that the Master Plan include in its Public Lands Program advanced land

acquisition for a fire station south of Lawrence Road in the vicinity of Route 28 (the Londonderry Turnpike).

Taking into consideration the proposed street and highway network for the Town of Derry, a location in the vicinity of Frost Road and Berry Road, south of South Range, would not only render access to Route 28, but to the southwest portion of Derry as well. Such an improved facility, properly manned and furnished with supplies and equipment, would be a sound and logical expansion of the fire protection services rendered by the Derry Fire Department.

East Derry Fire District

This is a facility presently located in East Derry and one in need of further manpower and equipment housing, largely because of the residential expansion that has taken place.

The highest-priority need to meet present and near future demands is in the northwest portion of Derry, within the boundaries of the East Derry Fire District. Taking into consideration the Highway Plan and proposed Land Use Plan, which call for medium- and low-density residential development, as well as industrial development in the west and central portions of Derry, a northern location appears to be most appropriate. A location with ready access to the Route 28 Bypass is clearly indicated to facilitate northwest and southeast travel for the equipment. Additionally, a site accessible to collector streets or, ideally, an arterial road rather than residential service roads would be preferable. Therefore, a location at Pingree Road and English Range Road, with ready access to Route 28 Bypass, appears to be a sound location for such a new facility manned by adequate manpower and equipment to provide the added fire protection needs in the East Derry

District.

Long-range considerations should incorporate provisions for advanced land acquisition for a fire station site in the eastern portion of Hampstead Road. A location near the Hampstead town line, in the vicinity of Damren Road and Hampstead Road, is one that would appear to serve the fire protection needs of the eastern portion of Derry and could possibly provide fire protection services to that part of Hampstead as well as Sandown and Chester.

C. Town Offices

As the inventory and analysis pointed out, the Town Office facilities today are those that the community had when Derry was half its present population size. The Town falls short in rendering adequate and attractive administrative and municipal facilities. With the recent change in government, the Town Council is in need of a formal Council Chamber and official meeting place. It is around such a core of local government that administrative facilities should be provided. The Master Plan recommends that a Town Office facility be provided in conjunction with a municipal center. Such a Town Office facility should result in the consolidation of the general municipal administration.

On examining town offices of similar requirements in other towns, a building of 10,000-12,000 square feet should be considered for the initial construction. It is recommended, in addition to the Council Chamber, meeting rooms for committees and staff be provided and accommodated in a new building. Fire and police are presently in separate facilities. Public safety administration might well be located in a new town administration building.

Planning and Inspection Departments are presently located at 40 Fordway, along with the Public Works Department. For the convenience of residents and businesses, those services should be located in a new building. Similarly, the Director of Public Works and Engineering should be easily accessible to the Chief Administrator and Mayor of Derry.

Mayoral offices and administrative assistant offices are obvious needs in the Town of Derry in conjunction with a new municipal building. Appropriate ancillary service quarters, such as secretarial, drafting, reception, communications, etc., are necessary additions to be considered in the construction of a municipal building.

With the need for economic development, headquarters for economic and community development and the Housing Authority should be properly housed in such a municipal building. With the need for additional Town Clerk personnel and record keeping, along with tax collection requirements and overall fiscal management needs, facilities for those town functions in a new Town Office building should be provided.

There are some municipal functions that could well remain in their place of activity, such as the Housing Authority presently located in the Adams Memorial Building and the Recreation Administration in the West Side Community Building. These headquarters might well remain in their present offices with only the Directors moving to a central municipal building.

Municipal Complex

Community identity was an issue that was raised in the Citizens Survey conducted by the Planning Board. Additionally, community

goals addressed the need for a community focal point. It is a recommendation in the Master Plan that the Town provide for a municipal center that provides for additional administrative office space for the town and other community facilities. It is recommended that a detailed Master Plan for such a complex be developed by the Planning Board and/or a special study committee soon.

With this in mind, the Master Plan makes the recommendation for the acquisition of a large (approximately 50 acres) parcel near the geographic center of Town for a municipal center.

D. Public Works

Under the Department of Public Works come sewer and water, discussed in a separate portion of the Master Plan. It also is responsible for maintenance of town properties, streets and highways, and sewer and water improvements, engineering review and solid waste.

Town Garage Facilities

The Town has a large investment in its Public Works Department equipment. The Town Garage, recently adequate to handle the equipment, is now falling short of garage space for the equipment since it has to accommodate storage space, lunch rooms, offices, parts and storage. It is recommended that an ell be added to the existing Town Garage with offices, lunch rooms, etc. provided in the "heel" of the ell. Such an ell would extend from the present building along the fence line towards the diesel pump.

Salt and Sand Storage

The recent addition of a salt and sand storage is expected to meet the needs for the Town of Derry for the foreseeable future.

E. Solid Waste Collection and Disposal

The Town's already marginal solid waste disposal site is subject to closing, and the Town is in the process of developing alternate means of solid waste disposal. As a result of a series of investigations, the Town of Derry is engaging in contracting for a solid waste-to-energy conversion program. This means the establishment of a generating facility fired with solid waste. The solid waste would be collected by the community and would be run through a sorting for recycling process with burnable waste converted to gas to create energy for electricity.

The recommended site is on the Town's land west of Fordway in the vicinity of the present construction for the expanded sewage treatment facility. This measure is an appropriate step in resolving the community's solid waste disposal needs. While it will remain the responsibility of the community to furnish a transfer station, it would be a private contract that provides the service of solid waste-to-energy plant.

F. Town Library Facilities

The Town Library facilities are, as pointed out earlier, inadequate. A new library or expansion of the present library has been under consideration over the last few years. A delay in construction or addition to the present library would appear to be appropriate in light of the municipal complex. A Town Center would not only be a logical place for a library but it would also be a substantial asset to a Town Center since the Town Library would complement the Town Center activities. Here again, the multiplicity of ancillary uses and interchange of these uses would make a location for the Library, in

conjunction with the municipal center, a more desirable, economical choice for the Town.

It is recommended that the efforts of the Library Trustees be directed towards participation in a municipal center and that the Town's future library needs be combined with a cultural and performing arts center in the municipal complex.

SECTION VIII A. OPEN SPACE AND CONSERVATION

Derry has alloted to conservation and open space a total of 510 acres. This land includes Hood Park, land areas acquired by the Conservation Commission, Gallien's Beach at Beaver Lake, and smaller parcels scattered throughout the community. Yet in 1985, this falls far short of the 1,270 acres recommended in 1965 and does not make provision for protecting some of the natural areas, rural characteristics and unique and other environmentally-sensitive areas.

The Recreation Map submitted shows areas of present ownership by the community and their relationship to populated areas of the Town of Derry.

Derry's population is now around 25,000, and the Town maintains and operates a Park Program intended for a population of 10,000-15,000. This has resulted in:

1. Inadequate community parks, small in size and often not developed.
2. Parks that are not readily accessible or adequately equipped for parking, picnicking, ball games, and other family activities ordinarily found in an urban community.
3. Limited teenage activities, even with the West Side Community Center.
4. Limited access to school facilities for Town recreational use.
5. An increasing need for Senior Citizens activities and facilities.
6. A linear park or trail system devoted to activities such as bicycle and cross-country skiing, hiking, jogging, etc. (While the Town has recently acquired the Boston-Maine Railroad right-of-way and the State has under its control a railroad right-of-way, an organized effort must be made to make these areas acceptable, useful "linear" park

activities. Their organized use would require not only off-site parking, but signing and policing.)

A Master Plan for the Town of Derry should make provisions for meeting and, hopefully, exceeding nationally accepted standards. It must also make provision to protect this Town's unique and scenic areas in order to retain the quality of life in Derry. The Master Plan now suggests 50% of the town's land area be left undeveloped. This undeveloped portion should be devoted to recreation, parks, playground, conservation, and an orderly open space, parks, and recreation program for the Town of Derry.

TABLE 23

RECOMMENDED PARK AND RECREATION SYSTEM FOR LOCAL MUNICIPALITIES

LOCAL/CLOSE-TO-HOME SPACE:

Component	Use	Service Area	Desirable Size	Acres per 1000 Population	Desirable Site Characteristics
Mini-Park	Specialized facilities that serve a concentrated or limited population or specific groups such as tots or senior citizens.	Less than ¼-mile radius.	1 acre or less	0.25-0.5 A.	Within neighborhoods and in close proximity to apartment complexes, townhouse development or housing for the elderly.
Neighborhood Park/ Playground	Area for intense recreational activities, such as field games, court games, crafts, playground apparatus area, skating picnicking, wading pools, etc.	¼-½ mile radius to serve a popl. of 5,000+ (a neighborhood)	15+ acres	1.0-2.0 A	Suited for intense development. Easily accessible to neighborhood population-geographically centered with safe walking and bike access. May be developed as a school park facility.
Community Park	Area of diverse environmental quality. May include areas suited for intense recreational facilities, such as athletic complexes, large swimming pools. May be an area of natural quality for outdoor recreation, such as walking, viewing, sitting, picnicking. May be any combination of the above, depending upon site suitability and community need.	Several neighborhoods. 1-2 mile radius	25+ acres	5.0-8.0A	May include natural features, such as water bodies, and areas suited for intense development. Easily accessible to neighborhood served.

Source: Recreation Park and Open Space Standards and Guidelines
National Recreation and Park Association

OPEN SPACE PLAN RECOMMENDATIONS

As development continues to consume more and more of the Town's land resources, stronger pressure will be applied to use marginal land and land areas that are necessary for the public health, safety, and general welfare. Derry must act now if open spaces and critical land resources are to be preserved. These land areas fall into three categories:

(1) Open Space for the public use and enjoyment, i.e., public land,

(2) Open Space because of marginal development suitability, i.e., wetlands and flood plains, and

(3) Open Space to preserve some of the agricultural land areas in Town, i.e., farm land and scenic areas.

The inventory of land resources showed that 39,284 acres are unsuitable for development. Additionally (projected over 20 years ago in the 1965 Plan), 270 acres should be preserved for public use and enjoyment. It is now that the Open Space Plan should make also provisions for the protection of key farmland to be preserved as agricultural areas, a plan which would also, in part, maintain some of the historic and scenic qualities of Derry.

Among Derry's scenic areas, certain sections should receive additional attention in order to expand already acquired land and add new acquisitions for the enjoyment of residents now and in the future. These areas should include the following:

(1) Adams Pond -

This area is still relatively undisturbed and lends itself to public use. In conjunction with Moore Hill, it provides a wild life

area and recreation-open space location in the north central quadrant of Derry.

(2) Ballard Pond -

The public has already acquired land at the outlet of Ballard Pond, but should seriously consider acquisition of additional land in this vicinity. This expanded Ballard Pond Public Area could include such recreation activities as hiking and picnicking and could provide a community focal point in the southeast quadrant of Derry.

(3) Great Island Pond -

The recent Citizens Survey indicated that 782 (over 22%) Derry residents favored access to Island Pond for the Town's residents. For this reason and the fact that Island Pond is, indeed, a remarkable natural resource within Derry, access to Island Pond should become part of an open space program and long-range plan for the Town of Derry.

(4) Warner Hill -

The highest elevation in Derry, Warner Hill is located in the central portion of Derry. With the acquisition of additional land area surrounding the Fire Tower, Warner Hill could become a central community focal point for general public outdoor enjoyment. This would be in addition to the outstanding vista that Warner Hill already affords.

(5) West Derry Open Space Area -

In West Derry, the only major open space area suitable for active use are the Alexander Carr Playground off Pierce Avenue, Birch Street, and Hood Pond. The tennis courts will take but a

small portion of the land area available. It is recommended that nature trails be expanded and improved and that the ski area be made more accessible and possibly be combined with a summertime slide to provide additional recreational activity for this heavily populated portion of Derry.

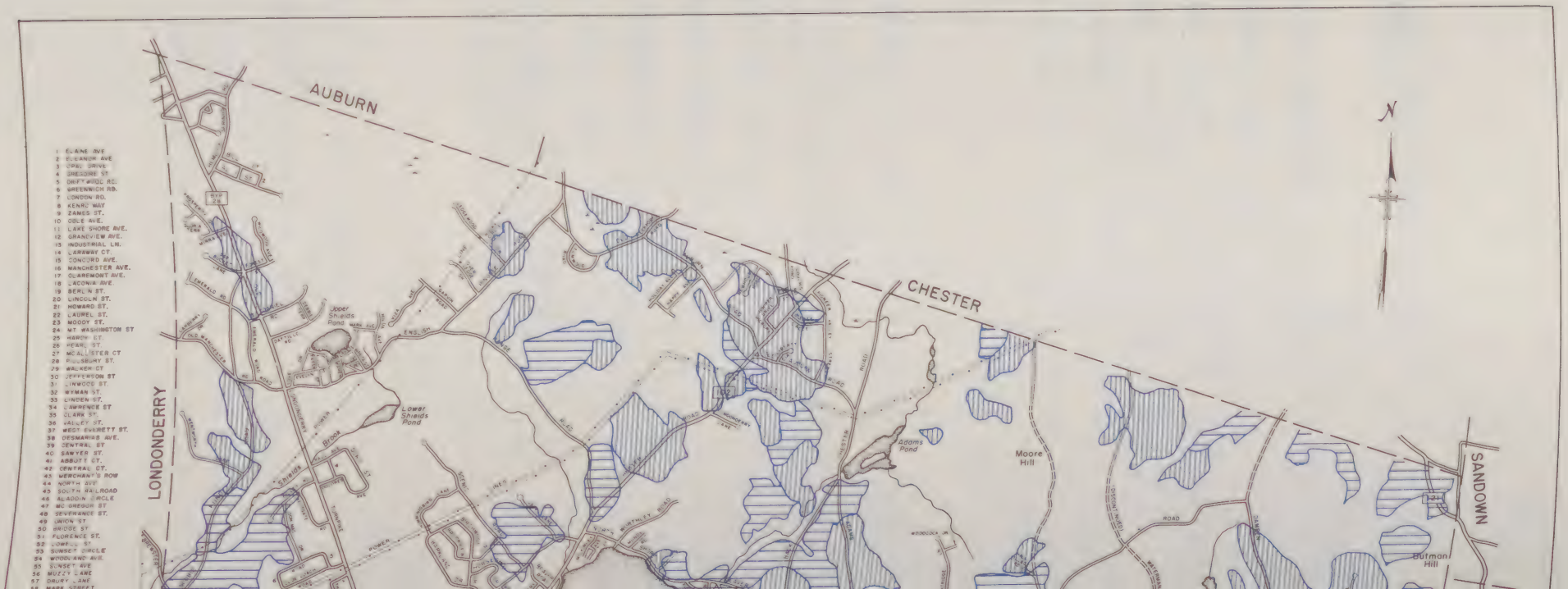
Development of Green Belts

The opportunity still exists for the Town of Derry, through good planning, to preserve green belts along its key drainage areas. In addition to reserving these areas as part of protected flood plains, they would serve a dual function as a green-way system throughout the Town of Derry. These green-ways would measure 200' wide (100' each side of the brooks and along key draining ways) and should be given high priority in any development approval in the Town of Derry. Included would be (the entire lengths):

(1) Beaver Brook,
(2) Horne Brook,
(3) West Running Brook,
(4) Taylor Brook,
(5) Leavitt Brook,
(6) Drew Brook, and
(7) Cunningham Brook

An additional green-way under this system should be developed (along with an open space program) along Upper Shields and Lower Shields Pond (Rainbow Lake) and Shields Brook in the northwest quadrant of Derry.

Properly incorporated in the planning effort now, and made part of the Master Plan, subdivision approval should be required to incorporate the provisions of this greenbelt system - open space program.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LONDONDERRY
SANDOWN
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2 ELEANOR AVE
3 OPAL DRIVE
4 GREGOIRE ST.
5 DRIFTWOOD RD.
6 GREENWICH RD.
7 LONDON RD.
8 KENRO WAY
9 JAMES ST.
10 COLE AVE.
11 LAKE SHORE AVE.
12 GRANDVIEW AVE.
13 INDUSTRIAL LN.
14 LARAWAY CT.
15 CONCORD AVE.
16 MANCHESTER AVE.
17 CLAREMONT AVE.
18 LACONIA AVE
19 BERLIN ST.
20 LINCOLN ST.
21 HOWARD ST.
22 LAUREL ST.
23 MOODY ST.
24 MT WASHINGTON ST
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26 PEARL ST.
27 MCALLISTER CT
28 PILLSBURY ST.
29 WALKER CT
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57 DRURY LANE
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Butman Hill
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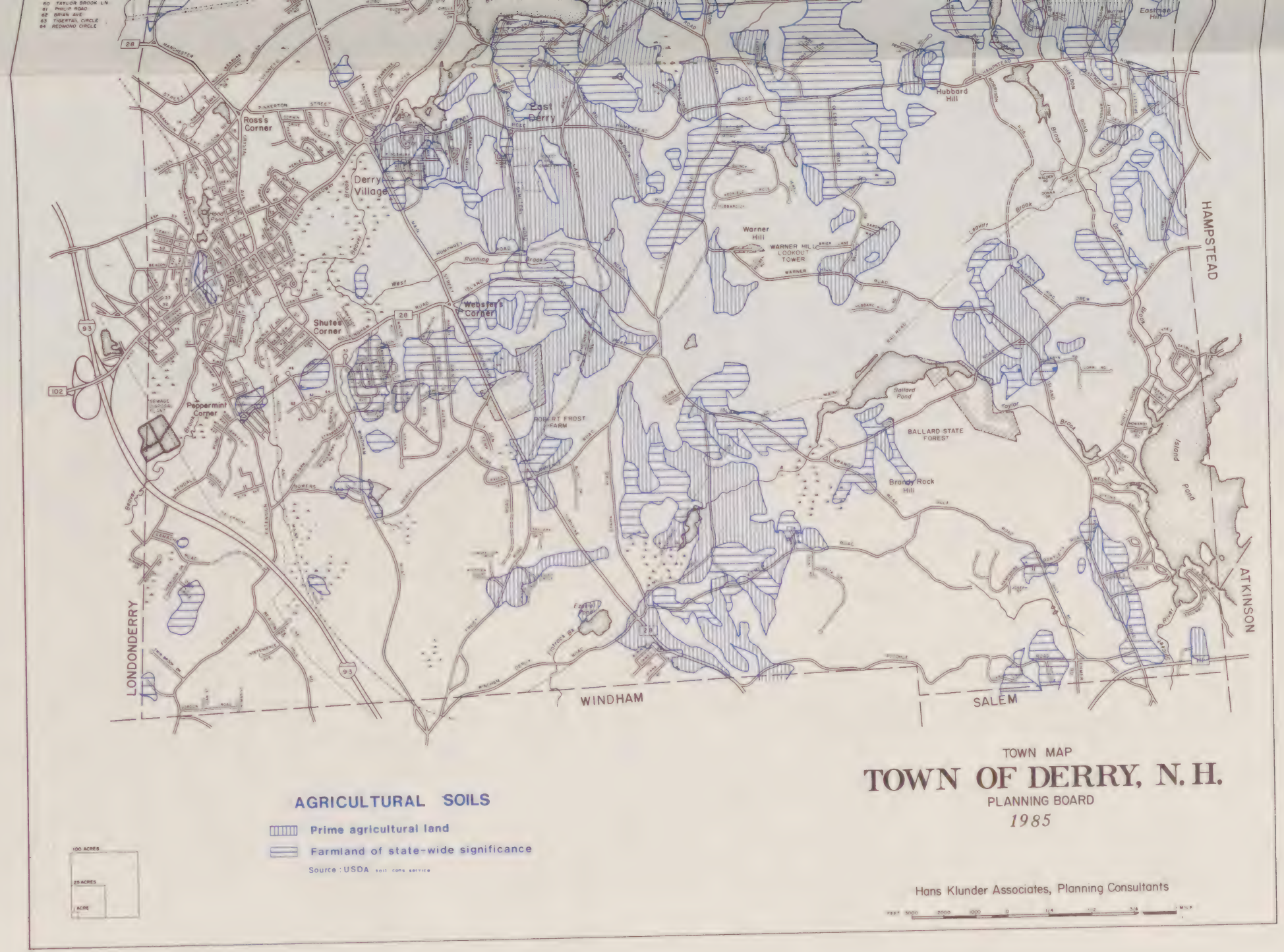
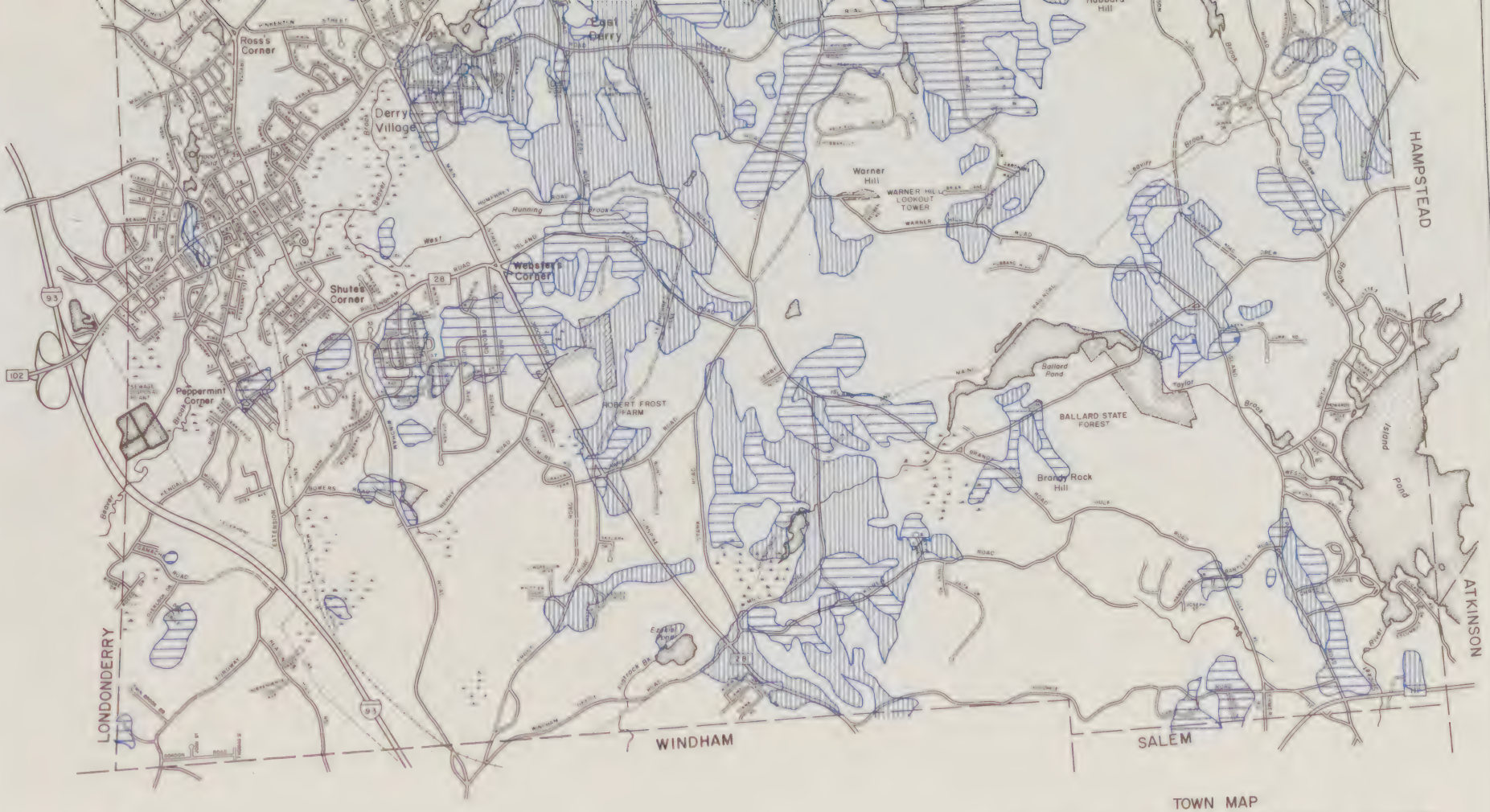

60 TAYLOR BROOK LN
61 PHILLIP ROAD
62 BRIAN AVE
63 TIGERTAIL CIRCLE
64 REDMOND CIRCLE
Ross's Corner
Derry Village
East Derry
Hubbard Hill
Eastman Hill
Warner Hill
WARNER HILL LOOKOUT TOWER
Webster's Corner
Shute's Corner
Peppermint Corner
ROBERT FROST FARM
Ballard Pond
BALLARD STATE FOREST
Brandy Rock Hill
Island Pond
Taylor
Running Brook
West
LONDONDERRY
WINDHAM
SALEM
ATKINSON
HAMPSTEAD
AGRICULTURAL SOILS
Prime agricultural land
Farmland of state-wide significance
Source: USDA soil cons service
100 ACRES
25 ACRES
1 ACRE
TOWN MAP
TOWN OF DERRY, N.H.
PLANNING BOARD
1985
Hans Klunder Associates, Planning Consultants



TOWN MAP

TOWN OF DERRY, N. H.

PLANNING BOARD

1985

AGRICULTURAL SOILS

Prime agricultural land

Farmland of state-wide significance

Source: USDA soil cons service

100 ACRES

25 ACRES

1 ACRE

Hans Klunder Associates, Planning Consultants

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B. WETLANDS, AQUIFERS AND AQUIFER RECHARGE AREAS

Large portions of Derry's population depend on groundwater supply, be they small communities or individual wells. For this reason, it is extremely important that Derry undertake measures that will protect this important natural resource for its residents. It is generally acknowledged that wetlands are collectors and replenishers of groundwater resources and aquifers hold and carry groundwater below surface.

One of the important elements is to identify and protect key, prime wetland areas. Not only do they make the environment in Derry attractive, but they are important as they sustain water levels in the ground. The larger the wetland area, the more important it becomes as a groundwater recharge area. These wetlands become particularly significant when they are interconnected because they then become areas that control flooding, prevent erosion, and act as filters to groundwater. The wetland areas identified to date as prime wetland are indicated on the Opportunities and Limitations Map and should be administered in the review process of subdivision regulations.

It is particularly important that those wetlands that are underlain by stratified sands and are identified as aquifer areas and aquifer recharge areas on the Opportunities and Limitations Map be protected. They are the most favorable wetland areas for groundwater resources.

In Derry there are some wetlands that are indeed interconnected and are of important value to the community's underground water supply. This is particularly true in cases where wetlands are associated with lakes, interconnecting lakes, or following water courses.

In association with the wetlands are the aquifer and aquifer recharge areas. Not through public ownership, but through protection from adverse development should these areas be set aside as a means of providing for orderly development in the Town of Derry.

Further and more detailed investigation is needed to define additional wetland areas and those areas that need to be protected because of their groundwater carrying capacities.

It is the Conservation Commission that can, as part of its Open Space Program, negotiate and acquire rights through dedication, donation, or marketplace acquisition in order to assure the future protection and availability of groundwater resources to areas that are not serviced with a water system drawn from a large source such as a municipal or city water system.

C. RECREATION

Public recreation facilities and opportunities are an asset to the community. The following report was compiled with the assistance of the Recreation Department and the Master Plan Subcommittee on Recreation. Present recreational facilities are listed and, more importantly, the program making use of these facilities. Derry's Recreation Program is making provisions for programs for young children to senior citizens. Activities vary from accommodating an average of 1,000 people at the Hood Park during the summer months to (when weather permits) ski activities at the Alexander-Carr Recreation Area.

The Recreation Department's report in 1985 states "As our community expands, the demands for services increase accordingly. Our programs reflect this increase in large enrollments of participants and greater number of programs."

As development continues to grow, open space provisions should be made by the community for passive recreation opportunities under a program of advance land acquisition with reference made to nationally accepted standards. (See Table 23, page 110.) Recent rapid growth makes it important to adequately provide for current and future recreational needs with open space programs for the continued and future enjoyment of Derry's residents.

While Derry has done well in providing recreation programs and, at one time, had adequate recreation facilities, today the Town does fall short of nationally acceptable standards for a population of 20,000 - 25,000+ people. The Town seems less supportive of these programs than it was ten years ago.

TABLE 24

PRESENT PARKS AND PLAYGROUNDS IN DERRY

1. ALEXANDER-CARR PLAYGROUND - PIERCE AVENUE
   - Lodge, main playground, picnic area & play equipment
   - Four (4) tennis courts on Birch St. with parking
   - Shutes corner picnic area with parking
   - Skiing and sledding hills
   - Nature trails

   Year-round use

2. BUCKLEY FIELD NEXT TO HOOD SCHOOL
   - Six (6) diamonds (some small for youngest groups)
   - Two (2) football fields (some fields overlap)
   - One (1) soccer field (some fields overlap)
   - One (1) field hockey field (some fields overlap)
   - One (1) tennis court
   - Kite flying and many special events

   After school use and weekends (spring, summer, fall)

3. DERRY VILLAGE SCHOOL
   - Six (6) diamonds
   - One (1) gym
   - After school use and weekends plus summer

4. GALLIEN'S BEACH AT BEAVER LAKE (to be developed)
   Swimming in summer

5. GRINNELL SCHOOL GYM
   Late fall, winter, early spring use when school is out

6. HOOD SCHOOL GYM
   Late fall, winter, early spring use when school is out

7. HOOD PARK PLAYGROUND - ROLLINS ST.
   - Two (2) tennis courts
   - Two (2) basketball courts
   - One (1) st. hockey rink and some sledding
   - Swim area, picnic area, play equipment and fishing
   - Organized summer programs
   - Nature area

   Year round use

8. MACGREGOR PARK - EAST BROADWAY
   Year round use (some sledding)

9. O'HARA FIELD - RAILROAD AVENUE
   - Little League field

   Spring, summer, fall use

10. PINKERTON ACADEMY (Privately Owned)
    Five (5) diamonds
    One (1) track
    Two (2) lacrosse fields - some fields are same
    Two (2) football fields - according to season
    One (1) field hockey field
    One (1) cross country course
    One (1) gymnasium
    After school and weekends plus summer

11. SOUTH RANGE SCHOOL
    Two (2) diamonds
    One (1) soccer field
    One (1) gym
    After school and weekends plus summer

12. VETERAN'S FIELD - RAILROAD AVENUE
    One (1) diamond with lights
    Two (2) tennis courts
    One (1) playground
    Spring, Summer, Fall Use (with lighting)

13. VETERAN's HALL - 31 W. BROADWAY
    One (1) gym and back-up facilities
    Year round use

14. WEST SIDE COMMUNITY CENTER - 39 W. BROADWAY (Privately Operated)
    One (1) playground
    Multiple use rooms
    Year round use

15. STATE OPERATED PUBLIC BOAT LAUNCH AT BEAVER LAKE
    Spring, summer, fall use

RECREATION RECOMMENDATIONS

The Master Plan recommends the preservation of key land areas for recreation activities in the future. It is recommended that the concentration be on both community-wide and neighborhood recreation activities. It is recommended that the central recreation facility be located in conjunction with the municipal complex.

On the other hand, neighborhood recreation facilities are proposed to be located in conjunction with

1) the East Derry School,
2) a site near Philip Road,
3) a site between Mill Street and Stark Road,
4) a facility south of Overlook Drive,
5) a recreation facility in the vicinity of Kilrea Road,
6) a recreation facility in the vicinity of the junction of Island Pond Road and Floyd Road,
7) a recreation facility east of Chester Road, west of Back Chester Road, north of the proposed Beaver Lake Collector Road facility,
8) a recreation facility east of Pingree Road,
9) a neighborhood facility in the northwest corner of Derry in the vicinity of the newly proposed Overledge Development, off Pingree Road,
10) use of old well sites (off Fordway),
11) a site near Scobie Pond Road off Old Manchester Road.

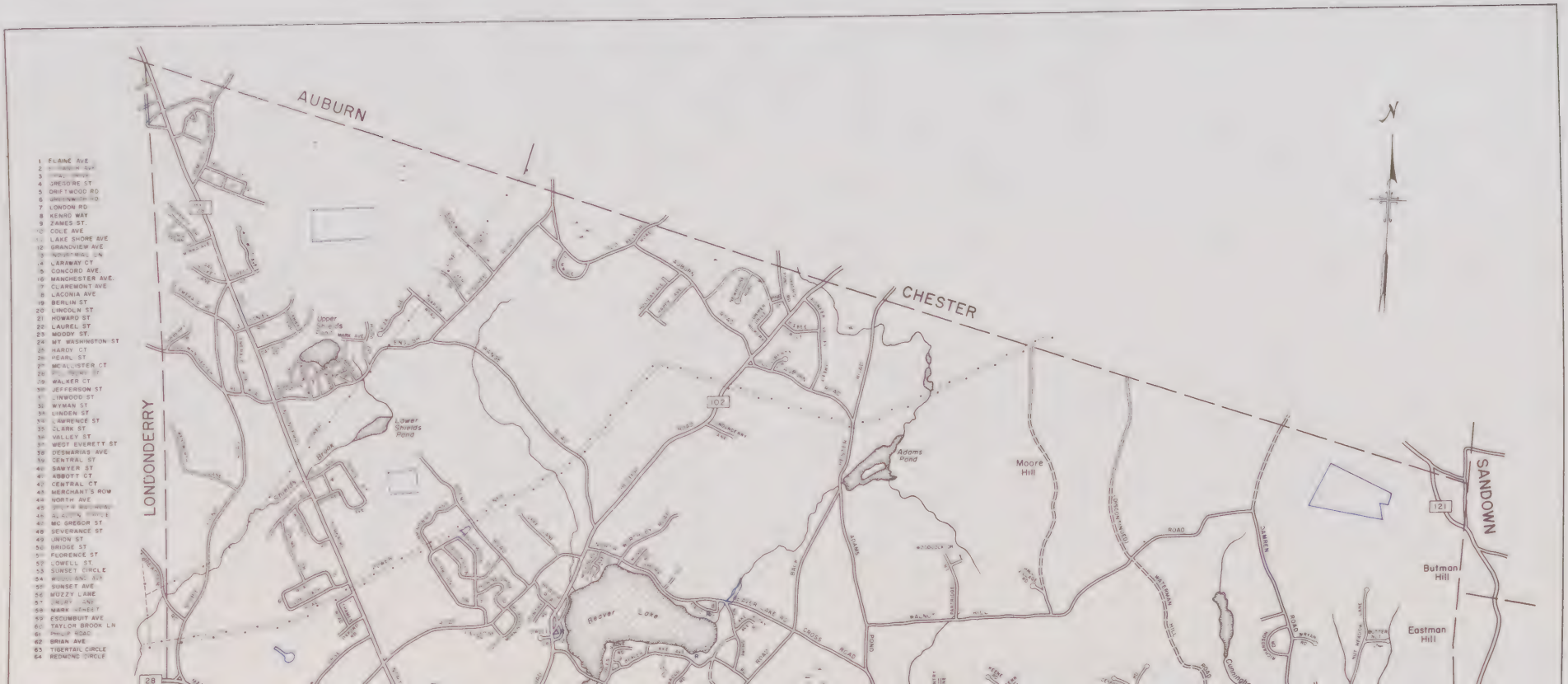
Where appropriate, these recreation facilities could be, in instances, located in conjunction with school activities, in the vicinity of neighborhood parks and central to neighborhoods that are being created and designed as the community develops. Those neighborhood facilities should be created and provided with improvements.

It is also recommended that indoor skating rink facilities and an indoor swimming pool (as part of the municipal complex) be considered to meet community-wide needs expressed in the Public Opinion Survey and recognized as a present shortcoming.

As in the past, recreation programs should be geared to meet the needs of the community to take advantage of any new facility.

It is recognized that, in addition to the Parks and Recreation facilities proposed above, education programs for arts and crafts for the young and for the elderly be provided. The former is particularly important in order to direct leisure time activities towards constructive and fruitful endeavors rather than to let spare time be the 'devil's playground'.

As indicated through the Citizens Survey, an active recreation program, coupled with adequate facilities, should be an important element in Derry's future.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7 LONDON RD
8 KENRO WAY
9 ZAMES ST.
10 COLE AVE
11 LAKE SHORE AVE
12 GRANDVIEW AVE
14 LARAWAY CT
15 CONCORD AVE.
16 MANCHESTER AVE.
17 CLAREMONT AVE
18 LACONIA AVE
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20 LINCOLN ST
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22 LAUREL ST
23 MOODY ST.
24 MT WASHINGTON ST
25 HARDY CT
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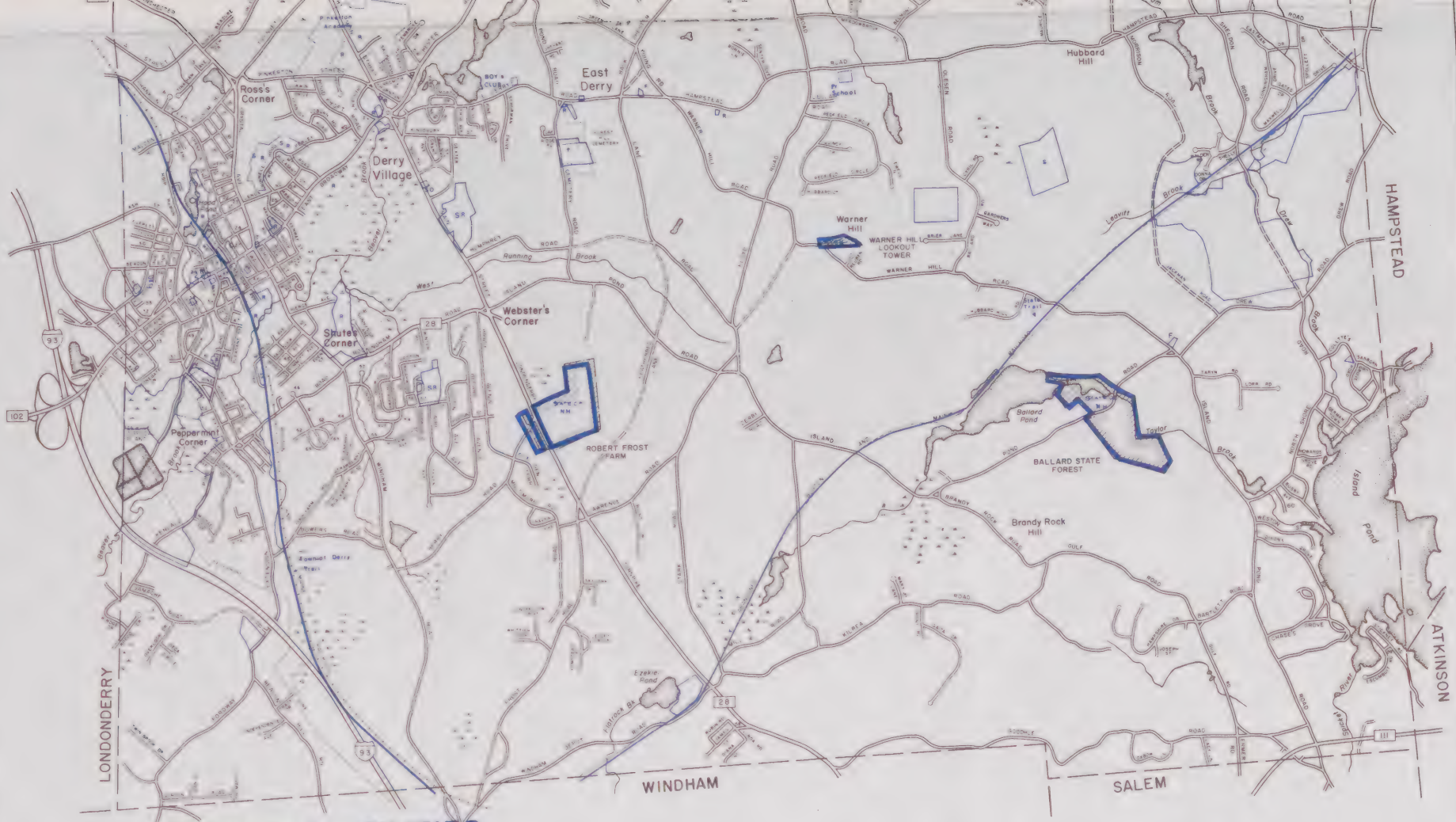
29 WALKER CT
30 JEFFERSON ST
31 LINWOOD ST
32 WYMAN ST
33 LINDEN ST
34 LAWRENCE ST
35 CLARK ST
36 VALLEY ST
37 WEST EVERETT ST
38 DESMARAIS AVE
39 CENTRAL ST
40 SAWYER ST
41 ABBOTT CT
42 CENTRAL CT
43 MERCHANT'S ROW
44 NORTH AVE
46 MC GREGOR ST
48 SEVERANCE ST
49 UNION ST.
50 BRIDGE ST
51 FLORENCE ST
52 LOWELL ST.
53 SUNSET CIRCLE
55 SUNSET AVE.
56 MUZZY LANE
57 CHERRY LNE
59 MARK HENRIET
59 ESCUMBUIT AVE
60 TAYLOR BROOK LN
61 PHILLIP ROAD
62 BRIAN AVE
63 TIGERTAIL CIRCLE
64 REDMOND CIRCLE
Upper Shields Pond
Lower Shields Pond
Beaver Lake
Adams Pond
Moore Hill
Butman Hill
Eastman Hill
102
121
28



COMMUNITY FACILITIES & TOWN OWNED LAND

1985

LEGEND

S School
F Fire Station
R Recreation

100 ACRES
25 ACRES
ACRE

SOURCE: TOWN TAX MAPS

PREPARED BY: HANS KLUNDER ASSOCIATES, NOV. 1985

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

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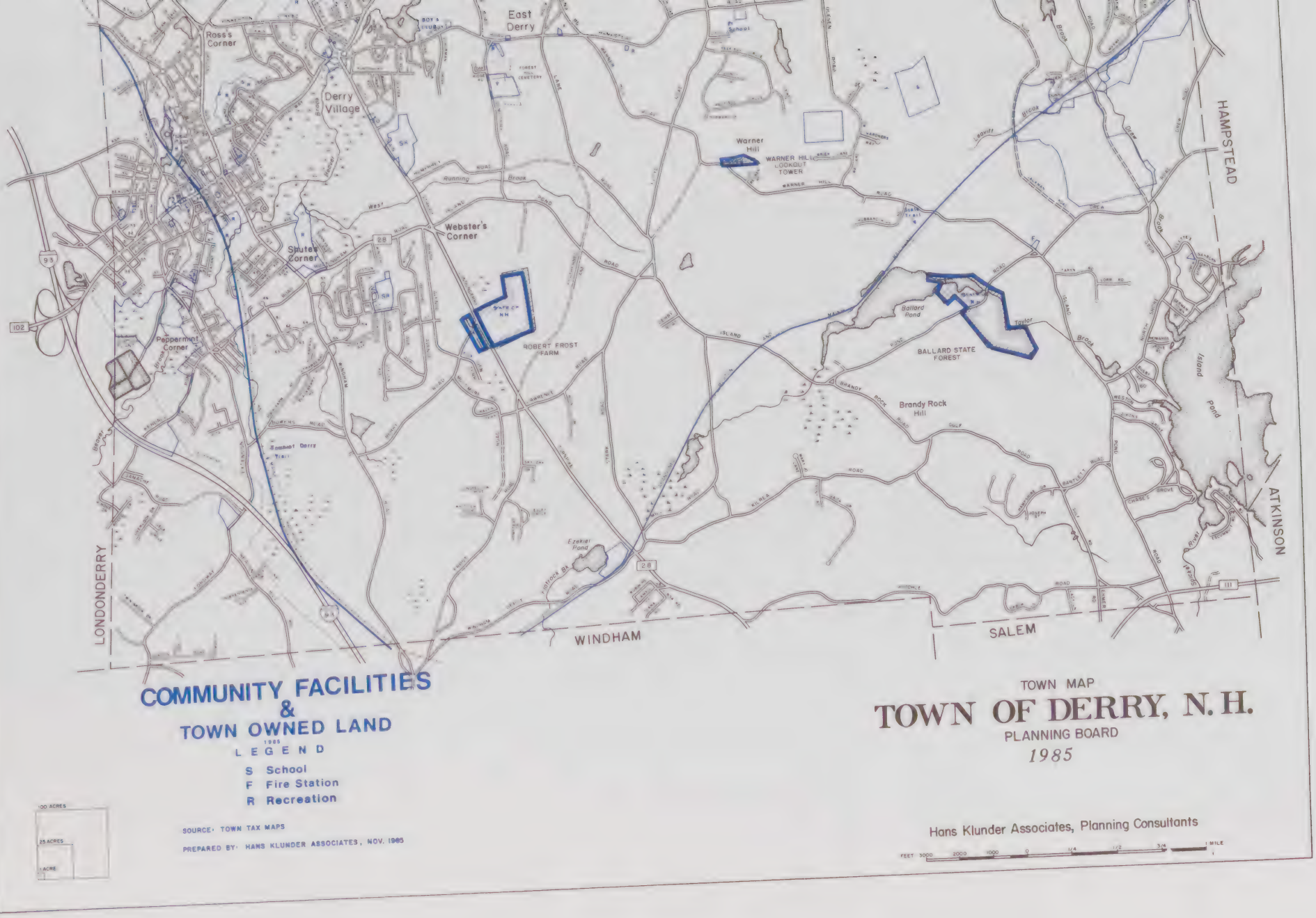

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FEET 3000 2000 1000 0 1/4 1/2 3/4 1 MILE

D. HISTORIC PRESERVATION*

Cultural Resources in Derry

The Cultural Resources Survey identified approximately 875 structures built in Derry prior to World War II. These individual structures combine with the landscape elements to make up the historic man made and natural environment of Derry.

Derry's development has historically been linked to regional transportation patterns. The first area of settlement was in the village center today, known as EAST DERRY, which was located on the east/west stagecoach road to Portsmouth, which was then the capital of New Hampshire. In 1806 a north/south turnpike was built to the new capital in Concord (Route 28) and a second village center grew up 1½ miles west at the intersection of these two routes. Originally distinguished as "Lower Village", this center is now known as DERRY VILLAGE. Forty years later, a new mode of transportation, the railroad came to town. The tracks ran parallel to the turnpike, but about 1½ miles west and a new village center grew up around the railroad depot, i.e., Derry Depot. This village is today known as WEST DERRY.

These three village centers have distinctly individual characters as defined by the styles of the buildings popular at their period of development. Each center has survived in a remarkably intact condition.

The Scotch-Irish people who came to settle Derry in the eighteenth century were mostly farmers. Therefore, major industry of the town was agriculture. Throughout the town, large tracts of land were cleared for

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*Report by Lynne Emerson Monroe, Historic Preservaton Consultant

these farms. During the nineteenth century subsistence farming gave way to specialty farming, primarily dairy and orchards, and in the twentieth century the poultry industry enjoyed a brief popularity. Both the buildings and the landscapes associated with these farms still survive to maintain the character of this segment of Derry's development.

In the last quarter of the nineteenth century, many of Derry's farms were abandoned so that people might go to work in the factories. Some of these farms were bought as summer houses and some remodeling took place during that time as an indication of this.

This was also the era of the streetcar, and the electric railroad brought summer tourists to Derry's lakes and ponds. Cabin colonies grew up on Island Pond, Chase's Grove, Germantown and Beaver Lake. Beaver Lake Lodge survived as an architectural resource from this time period, as did many of the cabin colonies. Other resources, such as the public pavilion, have been lost.

Like many towns in the state, Derry developed an industrial base during the nineteenth century; in this case the shoe industry, which grew in West Derry. Only two factories survive, as testament of this important industry.

Framework for Maintaining Derry's 'Small-Town Character':

The first important step for maintaining the character of Derry has been taken by identifying it in the Cultural Resources Survey. The next step will be to publicize the results of the survey and create an enthusiastic public. Generally, the results of a survey are enthusiastically received by the community. Most people love history and old houses. Once this appetite has been created, encouraging this public to take steps to

protect these resources is much simpler. The Historic District Commission will be seen in a leadership role in this process as a newly created Review Board in the Certified Local Government program for the state. The Commission will be seen as the resource for historic preservation issues, both by town boards and private property owners.

Resource Protection Measures

East Derry: This center has already been listed on the National Register of Historic Places. National Register listings give recognition and promote pride, but provide no specific protection for identified properties. The Historic District Commission should define boundaries as identified in the Cultural Resource Survey, and recommend to the Town Council that East Derry be considered as a local historic district. The boundaries of this district should be larger than the boundaries of the National Registered District already identified. Besides being governed by the ordinance that the Historic District Commission will create, a public education program for property owners should be undertaken. Good maintenance is a building's best protection. East Derry has an outstanding collection of Federal period buildings. It is architecturally significant and its best protection will be through good continued maintenance.

Derry Village: Derry Village is also predominantly Federal in style, and additionally it has late nineteenth, early twentieth century residential neighborhoods. Derry Village also boasts an intact brick factory and Pinkerton Academy among its architectural resources. This area is somewhat less intact, due to the rotary which bisected the area in the 1940's. Derry Village should be considered as a local historic district. Its boundaries

have been identified on the historic architectural areas map of the Cultural Resources Survey. In addition, property owners should be encouraged to undertake good rehabilitation programs.

West Derry: This area contains the largest concentration of older buildings in town. It grew up around the railroad and the shoe factories, and the growth and expansion of these industries can be read in the distinctive, intact residential neighborhoods, civic and industrial structures and a fine commercial district on Broadway, i.e. downtown. Preserving the character of this large area will involve multiple techniques. The first idea would be to create another historic district, but with fewer controls than those suggested for East Derry and Derry Village. The review of the Historic District Commission would be given only on demolition or new construction.

Residential Neighborhoods: New zoning should reflect the historic character of these neighborhoods. When discussing neighborhoods, it is important to work first with a public education program for residents and property owners. Neighborhood organizations can then be created for the understanding, enjoyment and promotion of these fine neighborhoods.

The National Trust for Historic Preservation publishes an excellent newsletter called "Conserve Neighborhoods". In addition to the newsletter, they run conferences and programs for neighborhood leaders. Derry should consider participation in this program. Leadership for this effort might come from the Historic District Commission or from the Derry Planning Office. Various avenues might be explored for identifying neighborhood

leadership. If this becomes a priority, the possibilities are limitless. These special areas are one of Derry's primary resources for maintaining a sense of community alive.

Downtown Commercial Center: A variety of late nineteenth, early twentieth century commerical buildings have survived. These are in various states of preservation, having had unfortunate rehabilitation efforts during the last decade. In many cases, the buildings survive in an intact condition on the second stories, while on the first story, storefronts have been replaced with newer unsympathetic, incompatible designs. Regional shopping centers and patterns have changed, as commercial strip development has developed on the borders of downtown and outlying areas. Downtown has some vacancies now.

Downtown has a diversity of uses, as well as a visual diversity. Unfortunately, many open spaces have been created, where buildings have been lost to fire and demolition. The filling-in of these spaces should be carefully supervised by the Historic District Commission so that the scale and texture of the streetscape can be reaffirmed.

West Derry is most often defined by its commercial area on Broadway, i.e. its downtown. The downtown area is an important element in identifying the character of Derry--where people shop, go to the post office, go to the Town Hall, and go to the library has a lot to do with their sense of community. If streetscape improvements, such as light fixtures, paving or pedestrian amenities are being considered, the Historic District Commission should be consulted as to their design. A fatal mistake of many downtowns is including Colonial or fake elements from other periods. Derry's downtown is emphatically turn-of-the-century and this unique character has been

defined in the Cultural Resources Survey and must be respected when improvements are considered. From time to time the state makes available money to fund a storefront program. Derry should participate if this possibility arises; or the town might undertake its own program by hiring a qualified architect familiar with this kind of work, to make suggestions to various merchants on how to improve their storefronts.

Many techniques exist for helping to revitalize a downtown. Regionally, many communities have conducted successful revitalization programs of their downtowns. Advice is available from the New Hampshire State Historic Preservation Office, Office of State Planning and Regional Planning Commissions. The National Trust for Historic Preservation has a Mainstreet Program, which offers matching funds for hiring Downtown Managers. Derry might look into this significant program. A downtown Merchant's Association might be formed to promote downtown shopping. A boost in the downtown economy would clearly boost the architectural resources as well.

Two studies were produced in 1984. They were compiled by a team of professionals from Applied Economic Research and Rist-Frost Associates. These studies are titled "Derry Railroad Corridor Feasibility Study, Part One: Economic Analysis" and "Part Two: Feasibility Study". These studies were undertaken as preliminary steps toward revitalizing the downtown. These studies should be utilized and implemented by a Downtown Revitalization Committee. This Committee should be formed of representatives of both the public and private sectors, i.e. a member of the City Council, the Historic District Commission, the Planning Board, the Chamber of Commerce, the Merchant's Association, a local merchant, a real estate owner, and possibly a developer to name some possibilities. This group

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could form a steering committee to implement the studies and begin work on the process of revitalization.

Summer Resort Areas: The areas identified on Derry's two lakes might be considered as secondary historic districts. In these areas, the Historic District Commission would have jurisdiction only over demolition and new construction. The guidelines of the commission could address the specific architecture of the cabins at the turn-of-the-century. Property owners could be encouraged, therefore, to maintain their properties in a characteristic and sympathetic manner. These areas are part of the unique character of Derry.

Historic Agricultural Areas: During the eighteenth and nineteenth centuries, much of the arable land in Derry was cleared for farming. This process has reversed in the twentieth century, however, and today many of the farms have been abandoned and much of the land is returning to forest cover. To accommodate Derry's considerable housing boom, many of these historic farms have already been bought and subdivided.

The Cultural Resources Survey identified nearly a dozen areas where the historic agricultural character of Derry was still remarkably intact. In these areas the landscape combines with the historic farms to present a wonderful picture of the agricultural heritage of the town. Driving or walking through these areas, it is possible to recall the days before the housing boom.

A current survey of the open land now remaining in Derry shows 50 parcels in the ownership of 30 to 35 people. Some of this land is used by two dairy farms, which still operate; half a dozen market garden farms;

some orchards and several horse farms (a recent trend). The balance of open land which is not owned by the farmers, is rented by them and used for crops, such as hay, alfalfa and corn. The availability of this land is especially important for dairy farmers who are unable to afford to own the amount of acreage they need. Indeed, the important dairy industry may be on the verge of extinction in Derry.

Open agricultural land is the single resource which contributes to the character of Derry that is in the greatest present danger. Therefore, the Historic Preservation Committee spent a great deal of time exploring the individual techniques available for protecting land. These techniques included municipal land use controls such as historic districting; agricultural zoning; land evaluation and its site assessment (LESA); the right-to-farm law; site plan review combined with cluster development and planned unit development; performance standards; and transferrable development rights. It was the consensus of the committee that a combination of these techniques would be helpful in achieving their goal. However, the disadvantage of most of these techniques was that they would require considerable professional expertise. This would mean additional volunteer efforts and/or staff in the town Planning Department to initiate and manage these programs. Nevertheless, the Committee felt that an investment in a part-time or full-time staff person to handle these programs, would be well worthwhile in the benefit gained by undertaking these protection measures.

The Committee also investigated private incentives and programs that could augment the community's efforts. A private/public partnership could be formed, which could increase the potential for protecting open land. These techniques included the formation of local development corporations,

and revolving funds to be managed by a local development corporation. The local development corporation can include land trusts; the problem again was the need for staff time. Other private possibilities included estate planning; easements; covenants and deed restrictions; and outright acquisition by both public and private sectors.

The overall concept of partial development was looked on favorably as the strongest possibility. The advantage of this concept is that it involves the establishment of an informal partnership among the landowner, local conservation groups, the developer and the bank responsible for financing the package. This approach is beneficial because it allows fair compensation to the large property owner and provided for new housing, while protecting land resources critical to the community.

The recommendation of the Historic Preservation Committee, therefore, is that an ongoing group, a Landscape Preservation Committee, be formed to begin the actual implementation of land protection. This group should have representatives from both public and private sectors.

Other Possibilities

With the development of these implementation techniques, the remaining sections of Community Goal #2 and #10 have been met. Other elements of the Master Plan should be reviewed for compatibility with historic preservation goals. These include:

Transportation Many of the roads and highways in Derry represent historic routes of travel. These roads should be given special consideration. Some areas have been identified on the map as scenic

agricultural and historic areas. Every effort should be made to divert traffic away from these historic routes, rather than widening them to accommodate increased traffic through the area. Highway and road improvement can potentially have serious impact on the integrity of Cultural Resources. Forethought and flexibility should be the watch words when dealing with such improvements. The Department of Public Works and Highways should be informed that Derry now has a complete Cultural Resources Inventory. This will help them in the pre-designed stage so that Derry can be assured that these resources will be given full consideration during corridor and design hearings.

Derry has serious traffic problems which must be addressed. One possibility that does not seem to have been explored is the area of mass transit. Regional studies have been and are being done, and Derry might consider stronger participation, even leadership, in these efforts. A mass transit system could be beneficial to all parts of town.

Recreation Derry's ponds and parks have been a source of recreation throughout its history. These historic uses should be maintained and encouraged. Town facilities in West Derry include tennis courts and a lake front recreational center. The development of more such resources is encouraged. The historic railroad corridor has been abandoned and should be maintained in an open condition. This corridor provides a scenic/historic recreation possibility.

The area known as the English Range, progressing down through Chester Road, Beaver Lake to East Derry and south of East Derry center is amazingly intact. This scenic section could be enhanced by a series of bicycle paths and/or trails. A brochure highlighting the

historic and scenic uses could be prepared to highlight the community's most outstanding assets.

Community Facilities The town should conduct a space-needs inventory and compare it with the space existing in some of its historic structures. For instance, the town owns the significant Adams Memorial Building, which has a particularly high potential for use as a theatre or arts center. Its historic materials and location strongly suggest this use. A study report of the feasibility of reusing this building, produced in 1982, will be very helpful with this project. The Capital Improvements Program should reflect the needs of these buildings, for maintenance and rehabilitation.

It is important that the implementation efforts of other phases of the Master Plan, such as transportation, economic development, and downtown revitalization, be coordinated with the cultural preservation efforts outlined in this segment of Derry's Master Plan.

SANDOWN
Buttman Hill
Eastman Hill
CHESTER
Moore Hill
Adams Pond
AUBURN
LONDONDERRY
N


AUBURN
CHESTER
LONDONDERRY
SANDOWN
N
1 ELAINE AVE
2 ELEANOR AVE
3 OPAL DRIVE
4 GREGORE ST
5 DRIFTWOOD RD
6 GREENWICH RD
7 LONDON RD
8 KENRU WAY
9 ZAMES ST
10 COLE AVE
11 LAKE SHORE AVE
12 GRANDVIEW AVE
13 INDUSTRIAL LN
14 LARAWAY CT
15 CONCORD AVE
16 MANCHESTER AVE
17 CLAREMONT AVE
18 LACONIA AVE
19 BERLIN ST
20 LINCOLN ST
21 HOWARD ST
22 LAUREL ST
23 MOODY ST
24 MT WASHINGTON ST
25 HARDY CT
26 PEARL ST
27 MCALLISTER CT
28 PILLSBURY ST
29 WALKER CT
30 JEFFERSON ST
31 LINWOOD ST
32 WYMAN ST
33 LINDEN ST
34 LAWRENCE ST
35 CLARK ST
36 VALLEY ST
37 WEST EVERETT ST
38 DESMARAIS AVE
39 CENTRAL ST
40 SAWYER ST
41 ABBOTT CT
42 CENTRAL CT
43 MERCHANTS ROW
44 NORTH AVE
45 SOUTH RAILROAD
46 ALADDIN CIRCLE
47 MC GREGOR ST
48 SEVERANCE ST
49 UNION ST
50 BRUCE ST
51 FLORENCE ST
52 LOWELL ST
53 SUNSET CIRCLE
54 WOODLAND AVE
55 SUNSET AVE
56 MUZZY LANE
57 DRURY LANE
58 MARK STREET
59 ESCUMBUIT AVE
60 TAYLOR BROOK LN
61 PHILIP ROAD
62 BRIAN AVE
63 TIGERTAIL CIRCLE
64 REDMOND CIRCLE
Upper Shields Pond
Lower Shields Pond
Adams Pond
Beaver Lake
Moore Hill
Butman Hill
Eastman Hill
Shields Brook
28
102

HISTORIC AND SCENIC AREAS

LEGEND

- OPEN AREAS AND VISTAS
- WOODED BACKDROP SURROUNDING OPEN AREAS AND VISTAS
- SUMMER CAMP AREAS
- HISTORIC AREAS (ARCHITECTURAL)
- STRUCTURES

100 ACRES
25 ACRES
1 ACRE

Lynne Emerson Monroe
Historic Preservation Consultant

TOWN MAP

TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

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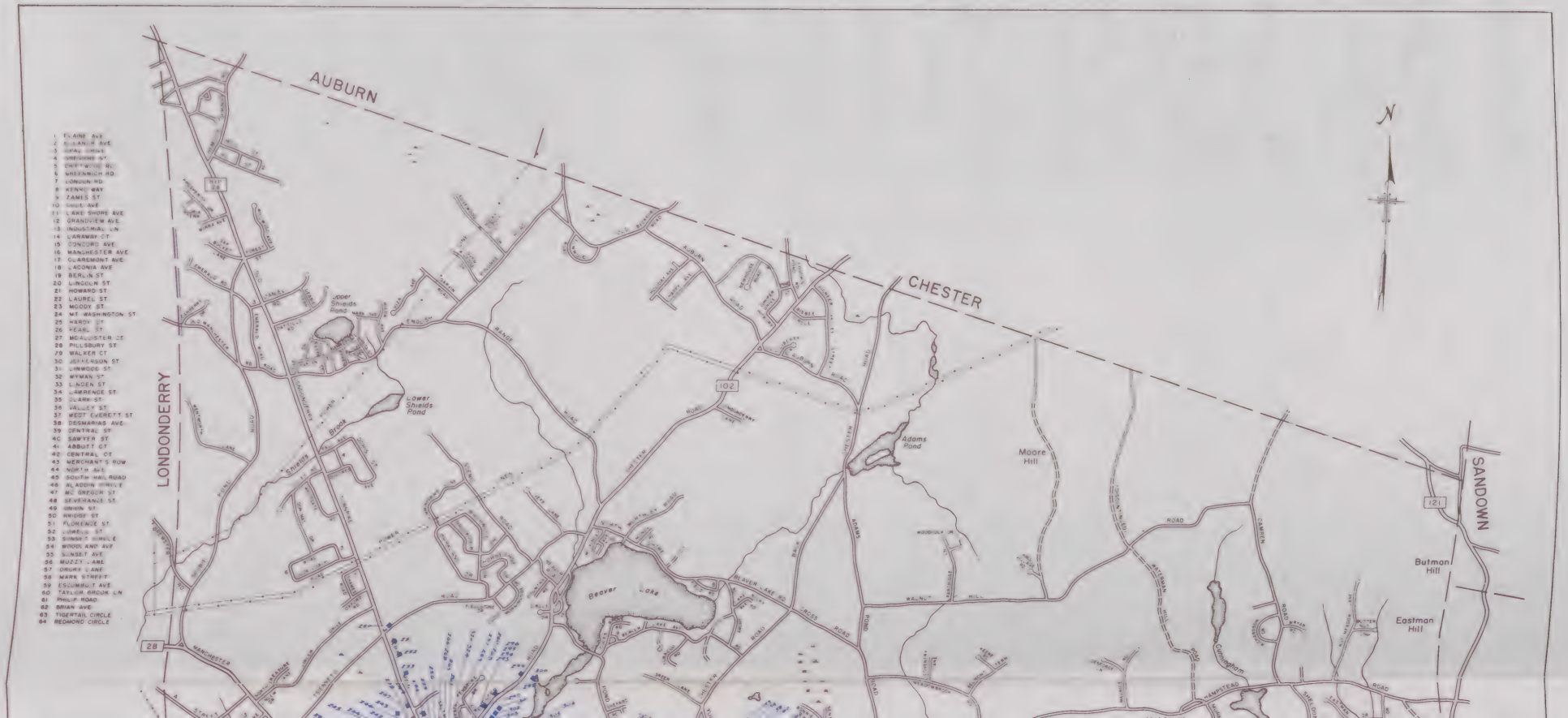
AUBURN
CHESTER
LONDONDERRY
SANDOWN
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2 ELEANOR AVE
3 EMAC DRIVE
4 GREENING ST
5 CHESTNUT RD
6 GREENWICH RD
7 LONDON RD
8 KENNO WAY
9 JAMES ST
10 COURT AVE
11 LAKE SHORE AVE
12 GRANDVIEW AVE
13 INDUSTRIAL LN
14 LARAWAY CT
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57 DRURY LANE
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59 ESQUIMALT AVE
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61 PHILIP ROAD
62 BRIAN AVE
63 TIGERTAIL CIRCLE
64 REDMOND CIRCLE
Upper Shields Pond
Lower Shields Pond
Beaver Lake
Adams Pond
Moore Hill
Butman Hill
Eastman Hill
Cunningham
102
28
121

HISTORIC STRUCTURES....

Lynne Emerson Monroe
Historic Preservation Consultant

TOWN MAP

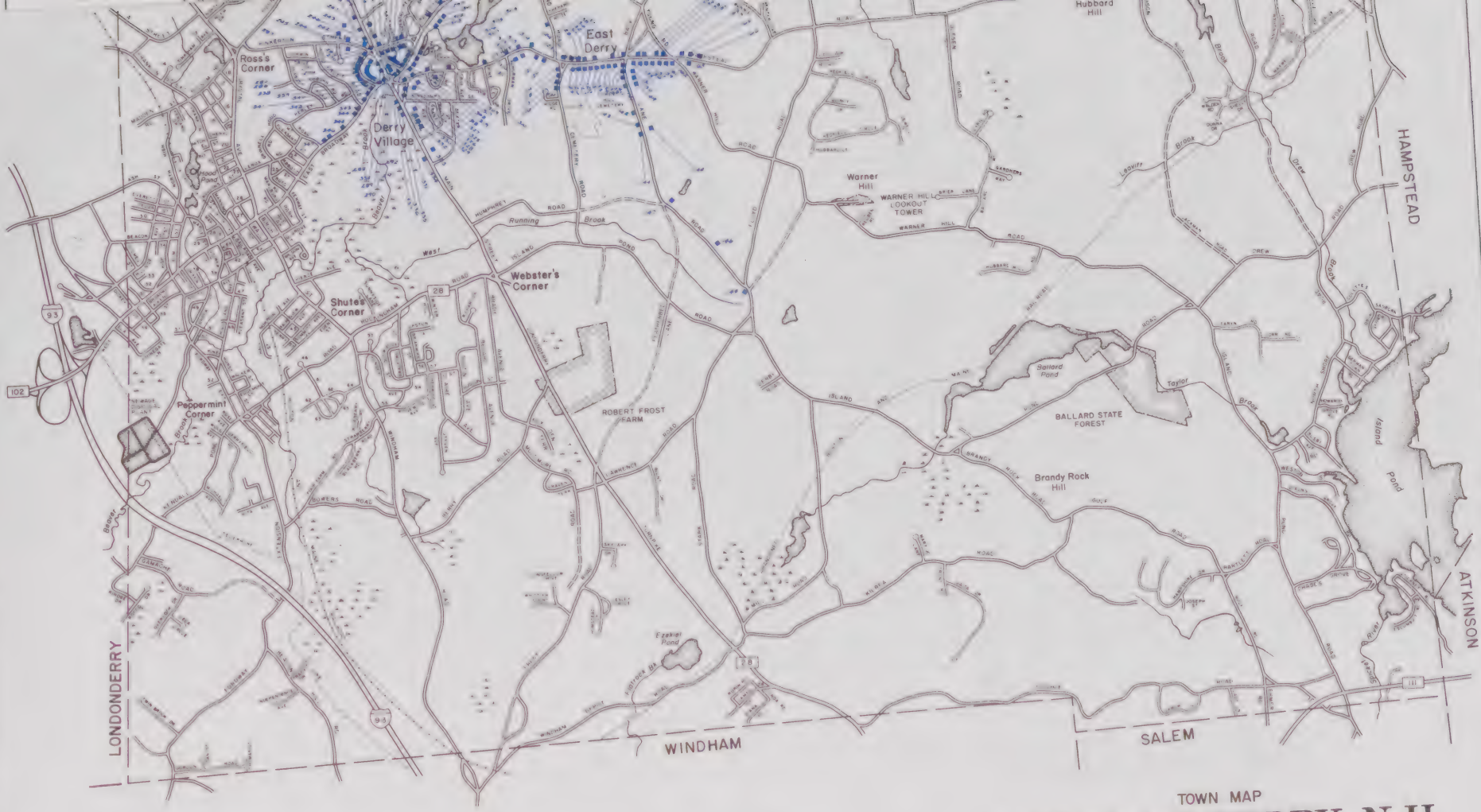
TOWN OF DERRY, N.H.

PLANNING BOARD

1985

Hans Klunder Associates, Planning Consultants

100 ACRES
25 ACRES
1 ACRE



TOWN MAP

TOWN OF DERRY, N. H.

PLANNING BOARD

1985

HISTORIC STRUCTURES....

Lynne Emerson Monroe
Historic Preservation Consultant

Hans Klunder Associates, Planning Consultants

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APPENDIX

QUESTIONNAIRE SUMMARY
(based on 20% return)

Introduction

Questionnaires distributed in early August and returned to the Planning Board have given significant insight into actual concerns of the Town of Derry. Approximately 20% (or 1810) of the 9050 questionnaires sent out have been returned and tabulated. It should be noted that early percentages calculated (on approximately 5% of returns) established a definite pattern of response by the townspeople that has not varied appreciably. Subsequent returns have merely reinforced the initial responses. Specific points of note are as follows:

1. Under housing construction, 61% felt single family housing should be encouraged with mild restrictions, while 34% felt apartments and mobile homes should not be allowed.

   Slower residential growth was favored (67%).

2. Faster industrial growth was favored, with the stipulation (93%) that it be light industry. 60% said they favored neighborhood stores, and felt the Town needed: 1) Entertainment Facilities, 2) Retail Stores, 3) Parking Facilities, 4) Service Businesses, and 5) Professional Facilities, in that order.

3. Concern for the natural environment prompted 95% of the people to indicate their feeling that Derry should have codes and enforcement programs to protect the environment. They were willing to protect and pay for scenic areas (76%), sensitive wetlands (75%) and farmlands (65%).

4. The majority of people rated police protection, fire protection and schools good, while road maintenance, road construction and zoning enforcement were thought to be rather poor. On the public spending question, people thought more money should be spent on road maintenance (97%) and libraries (89%).

5. Nearly half of the people had privately owned sewer and water facilities.

6. The people favored protecting historic buildings (81%) and cultural resources (75%), and wanted to provide for the means to retain these town assets.

7. Under recreation, the three main votes were for a community center for all ages (797), bicycle trails (763) and an indoor pool (644). Also, access to Big Island Pond for Derry residents only was indicated (78%).

8. Zoning changes for neighborhood child care facilities and creating a town center (Town Hall, Common, etc.) each got about a 50-50 response.

9. 75% said the U.S. Post Office was adequate.

10. On the taxation questions, people did not favor a state income tax (76%), or a state sales tax (70%) and wanted to keep taxes and services at their current levels (68%).

One of the most positive points gleaned from the questionnaire is that the people live in Derry because they like it (78%) - they like the town and its people and are concerned because the 'small town atmosphere' that first attracted and has kept them in Derry appears to be threatened. It is this consultant's opinion that careful long-range planning through the Comprehensive Planning effort can preserve the physical and socio-economic climate.

TOWN OF DERRY
PUBLIC OPINION SURVEY

2. Place of Work: Derry - 363 Outside - 1222

If you could find work locally, would you work in Derry? Yes 1112 No 293

3. If not employed, are you:

Retired 106 Part-time 32 Unemployed 20

4. Is Derry a nice town? Yes 1151 No 333

5. Property in Derry: Own 1,356 Rent 185

6. Should there be a second high school in town? Yes 358 No 997
Should it be an expansion of present facilities? Yes 612 No 470
Should it be a public high school? Yes 520 No 556

7. How should the town treat the following kinds of new housing construction?

	Not Allow	Allow with Severe Restrictions	Encourage with Mild Restrictions
Public Low Income	513	642	313
Public Elderly	66	349	1023
Sub. Moderate Inc.	453	842	383
Apartments	670	616	205
Town Houses	512	624	327
Single Family	44	322	1102
Mobile Homes	701	533	255
Duplex	392	664	418

8. Recreation Derry needs:

Community center for all ages?	Yes 797	No 316
Tennis Courts?	Yes 392	No 443
Ball Fields?	Yes 565	No 301
Skating Rink?	Yes 536	No 344
Indoor Pool?	Yes 644	No 343
Boat Launch?	Yes 513	No 387
Bicycle Trails?	Yes 763	No 218
All Terrain Vehicle Trails/Off Highway Recreational Vehicle Trails?	Yes 340	No 566

Access to Big Island Pond
for Derry residents only? Yes 782 No 227

9. Growth:

	Slower	Faster	Same
Residential growth should be:	1204	95	231
Industrial growth should be:	360	645	341

	Yes	No
Light industry?	1379	103
Heavy industry?	466	861
Is there a need for: Retail Stores?	814	503
Service Businesses?	688	519
Professional Facilities?	623	607
Entertainment Facilities?	955	337
Parking Facilities?	727	525

10. Public Services

Rating				Privately Owned	Spend		
Good	Fair	Poor			More	Same	Less
265	166	117	Sewer Service	645	196	327	108
348	200	93	Water Service	604	169	392	118
967	325	72	Police Protection		343	836	139
1107	212	24	Fire Protection		328	871	91
210	532	700	Road Maintenance		913	408	32
205	475	487	Road Construction		558	540	110
794	321	54	Schools		339	680	155
431	466	343	Libraries		584	547	73
176	362	537	Zoning Enforcement		406	497	121
247	397	191	Elderly Programs		387	514	136
460	500	246	Parks and Recreation		455	602	107
152	247	461	Enforcement of All Terrain Vehicle and Off Highway Recreational Vehicle Laws		362	369	168

11. Conservation and Cultural

Should Derry protect and pay for:

Scenic areas? Yes 1134 No 349;
Sensitive Wetlands? Yes 970 No 315;
Farmlands? Yes 868 No 504;
Historic Sites & Buildings? Yes 1156 No 278;
Cultural Resources? Yes 974 No 320.

Should Derry have codes and enforcement programs to protect the environment? Yes 1443 No 74

12. Do you favor: Neighborhood Stores? Yes 1193 No 331
Zoning changes for child care facilities? Yes 678 No 619

13. Should Derry create a town center? Yes 703 No 739

14. Is the US Postal Service adequate? Yes 1159 No 391

15. Miscellaneous
Would you support a state wide income tax Yes 332 No 1035
Would you support a state wide sales tax? Yes 424 No 991
Which of the following do you favor:
233 - Raising taxes
216 - Cutting taxes
941 - Keeping taxes and services at current levels

PUBLIC OPINION SURVEY

By the Planning Board Master Plan and Citizens Committee

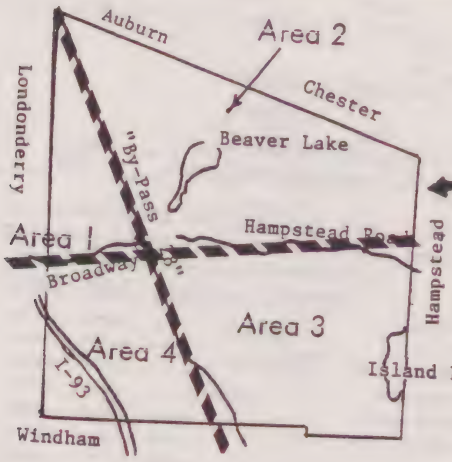
The Town of Derry is currently working on Phase I of updating its master plan for Derry's future. However, we need to know what you believe to be most important for Derry. Please give us some information and make your thoughts known by answering each item of the questionnaire and by adding your comments whenever you see fit. In order to be counted, please complete and return within two weeks!

Thank you for taking the time to help.

Planning Board Master Plan and Citizens Committee, Geraldine Bangs, Chairman

Geraldine Bangs

After completing questionnaire, please fold and mail



ONE RESPONSE PER HOUSEHOLD ONLY

1. Population Data
   How long have you lived in Derry? ____Years
   How many are in your household? ____
   Children's Ages ____0-5; ____5-10; ____11-16

Mark on the adjacent map approximately where you live

Do you live at: Big Island Pond ____; Beaver Lake ____; Rainbow Lake ____

2. Place of Work
   ____ Derry; ____ Boston; ____ Lowell;
   ____ Manchester Area; ____ Route 128, MA;
   ____ Nashua Area; ____ Lawrence;
   ____ Portsmouth Area; ____ Haverhill

   If you could find work locally, would you work in Derry? ____ Yes ____ No If no, why not?

3. If not employed, are you: Retired Part Time Unemployed Other Explain

4. Is Derry a nice town?
   ____ Yes, Why; ____ No, Why not

5. Property in Derry Own Rent

6. Should there be a second high school in town?
   Should it be an expansion of the present facilities? ____ Yes ____ No
   Should it be a public high school? ____ Yes ____ No
   ____ Yes ____ No

7. How should the town treat the following kinds of new housing construction?
   (Check one for each)

	Not allow	Allow only with severe restrictions	ENCOURAGE with mild restrictions	No opinion
Public Low Income	___	___	___	___
Public Elderly	___	___	___	___
Subsidized Moderate Income	___	___	___	___
Apartments	___	___	___	___
Town Houses	___	___	___	___
Single Family	___	___	___	___
Manufactured (Mobile homes)	___	___	___	___
Duplex	___	___	___	___

8. Recreation Derry needs: Community center for all ages
   (check no more than 3)
   Tennis Courts ____ Yes ____ No; Ball Fields ____ Yes ____ No;
   Skating Rink ____ Yes ____ No; Indoor Pool ____ Yes ____ No;
   Boat Launch ____ Yes ____ No; Bicycle Trails ____ Yes ____ No;
   All Terrain Vehicle Trails/ Off Highway Recreational Vehicle Trails ____ Yes ____ No;
   Access to Big Island Pond for Derry residents only ____ Yes ____ No

THANK YOU FOR COMPLETING OUR QUESTIONNAIRE
PLEASE MAIL OR DELIVER TO:

STAMP

PLANNING OFFICE
40 FORDWAY
DERRY, NH 03038

	Slower	Faster	Same
9. Growth — Residential growth should be:	____	____	____
Industrial growth should be:	____	____	____

Light Industry ____ Yes ____ No
Heavy Industry ____ Yes ____ No

Where should industrial development be located?

Is there need for: Retail Stores ____ Yes ____ No;
Service Businesses ____ Yes ____ No; Professional Services ____ Yes ____ No;
Entertainment Facilities ____ Yes ____ No; Parking Facilities ____ Yes ____ No;

10. Public Services — Rate the following municipal services and indicate if you think the town should spend more, less, or the same amount of money on their provision.

Good	Fair	Poor	No Opinion		Privately Owned	Spend More	Spend Same	Spend Less	No Opinion
____	____	____	____	Sewer Service	____	____	____	____	____
____	____	____	____	Water Service	____	____	____	____	____
____	____	____	____	Police Protection		____	____	____	____
____	____	____	____	Fire Protection		____	____	____	____
____	____	____	____	Road Maintenance		____	____	____	____
____	____	____	____	Road Construction		____	____	____	____
____	____	____	____	Schools		____	____	____	____
____	____	____	____	Libraries		____	____	____	____
____	____	____	____	Zoning Enforcement		____	____	____	____
____	____	____	____	Elderly Programs		____	____	____	____
____	____	____	____	Parks and Recreation		____	____	____	____
____	____	____	____	Enforcement of All Terrain Vehicle and Off Highway Recreational Vehicle Laws		____	____	____	____

11. Conservation and Cultural
Should Derry protect and pay for: Scenic areas ____ Yes ____ No;
Sensitive Wetlands ____ Yes ____ No; Farmlands ____ Yes ____ No;
Historic Sites and Buildings ____ Yes ____ No; Cultural Resources ____ Yes ____ No;
Should Derry have codes and enforcement programs to protect the environment? ____ Yes ____ No

12. Do you favor: Neighborhood Stores ____ Yes ____ No;
Zoning change for neighborhood child care facilities ____ Yes ____ No

13. Should Derry create a town center? (Town Hall, Common Etc.) ____ Yes ____ No
14. Is the US Postal Service adequate? ____ Yes ____ No

15. Miscellaneous
In the last few years, state aid to communities has decreased. This forces towns to rely more heavily on property taxes to pay town expenses; yet many residents feel their property taxes are already too high. Would you support a state wide income tax if it were used to increase state aid to local government and reduce local property taxes? (check one) ____ Yes ____ No ____ Don't Know ____ No Answer

Would you support a state wide sales tax to increase state aid to local government and decrease local property taxes? (check one)
____ Yes ____ No ____ Don't Know ____ No Answer

Which of the following do you favor?:
____ Raising taxes to improve services
____ Cutting taxes and reducing services
____ Keeping taxes and services at current levels
____ Don't know/ no opinion

Sectional Analysis of Returns

(AREA)		1	2	3	4	*Not Identified
		(%)	(%)	(%)	(%)	(%)
1. Where do you live?		7	23	26	21	23
2. Place of Work:	Derry	9	27	26	24	14
	Manchester	1	5	5	4	
	Nashua	2	3	4	3	
	Portsmouth	.002	.004	.007	.004	
	Boston	1	3	4	3	
	Lowell	.008	2	2	2	
	Rte. 128	1	4	5	3	27
	Lawrence	.006	2	3	3	
	Haverhill	.0008	.008	1	.003	
	Salem	.003	1	2	.003	
	Concord	.002	.0008	.0008	.003	
	Bow	0	0	0	0	
	Other	.008	2	.0008	1	
Would you work in Derry?						
	Yes	6	21	25	18	30
	No	5	25	22	17	31
3. If not employed, are you:						
	Retired?	8	19	26	20	27
	Part-time?	13	19	22	19	27
	Unemployed?	15	15	20	20	30
4. Is Derry a nice town?						
	Yes	7	24	28	18	23
	No	9	24	25	20	22
5. Property in Derry -	Own	6	26	28	18	22
	Rent	18	12	12	25	33
6. Second High School?	Yes	8	22	26	20	24
	No	8	24	26	22	20
Expand present facilities?	Yes	8	21	26	18	27
	No	6	22	21	22	29
Public High School?	Yes	7	24	27	21	21
	No	8	24	25	21	22

*Exact location (by area) was not designated on survey.

7. Housing Construction:

AREA	Not Allow 1	2	3	4	*Not	Severe Restrictions 1	2	3	4	*Not	Mild Restrictions 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Public Low Inc.	7	24	25	22	22	6	25	28	22	19	13	20	20	22	2%
Public Elderly	11	23	17	26	24	8	25	31	20	16	8	24	26	23	19
Sub. Mod. Income	8	25	25	21	21	5	16	17	15	47	8	24	22	23	23
Apart-ments	7	26	26	20	20	5	24	26	22	23	15	19	20	22	24
Town Houses	9	24	25	23	19	5	25	28	21	21	9	23	25	22	21
Single Family	5	16	27	23	30	5	25	30	21	19	8	24	25	22	21
Mobile Homes	5	29	28	20	17	7	22	27	23	21	13	20	19	22	26
Duplex	6	24	29	21	19	4	23	30	20	23	12	22	19	24	23

8. Recreation:

AREA	YES 1	2	3	4	*Not	NO 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Community Ctrs.	8	23	22	23	24	8	27	27	17	21
Tennis Courts	8	25	29	17	23	8	24	22	23	23
Skating Rink	8	20	27	22	23	7	28	23	20	22
Boat Launch	5	12	16	12	55	7	28	25	19	21
ATV Trails	7	18	25	26	24	8	27	26	19	20
Ball Fields	7	24	25	20	24	7	24	25	21	23
Bike Trails	7	24	25	9	35	6	26	20	16	32
Access to Big Island Pond	8	21	25	23	23	6	26	33	17	18

9. Growth:

AREA	FASTER 1	2	3	4	*Not	SLOWER 1	2	3	4	*Not	SAME 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Residential	4	25	6	58	5	8	24	28	18	22	7	23	24	40	6
Industry	8	24	25	22	21	6	23	22	26	24	9	26	25	19	21

AREA	YES 1	2	3	4	*Not	NO 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Light Industry	7	18	26	21	28	4	19	24	22	31
Heavy Industry	8	22	23	27	20	7	25	26	20	22
Retail Stores	8	23	31	22	16	6	36	22	25	11
Service Business	7	19	24	20	30	8	32	25	23	12
Professional	7	22	30	22	20	9	29	24	25	13
Entertainment	9	25	27	24	15	6	28	26	22	18
Parking	8	25	27	21	19	7	26	26	25	16

*Exact location (by area) was not designated on survey.

10. Public Services:

AREA	GOOD 1	2	3	4	*Not	FAIR 1	2	3	4	*Not	POOR 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Sewer	17	17	14	32	20	13	21	20	20	26	3	30	24	18	25
Water	14	15	13	32	26	11	18	19	23	29	4	22	25	26	23
Police	8	24	24	20	24	7	24	21	19	29	6	21	33	21	19
Fire	8	24	26	21	21	6	27	25	19	23	4	29	21	17	29
Rd.Main.	8	21	18	28	25	8	24	24	23	21	7	25	29	17	22
Rd.Const.	9	23	21	25	22	8	25	24	22	21	7	24	27	17	25
Schools	8	25	26	22	19	7	24	26	19	24	11	24	15	24	26
Library	8	24	25	32	11	8	22	27	23	20	7	28	23	19	23
Zoning	7	18	25	22	28	7	23	27	34	9	8	24	25	20	23
Elderly	10	25	25	22	18	9	19	25	20	27	6	22	21	16	35
Parks	10	22	22	25	21	7	25	23	20	25	9	31	29	20	11
ATV Laws	9	22	24	28	17	7	25	29	19	20	7	23	31	20	19

10. Public Services, cont.

AREA	MORE 1	2	3	4	*Not	SAME 1	2	3	4	*Not	LESS 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Sewer	5	29	22	17	27	16	19	17	28	20	11	23	17	30	19
Water	7	26	25	20	22	15	21	16	28	20	12	18	14	35	21
Police	6	18	30	21	25	9	27	24	20	20	6	19	18	16	41
Fire	10	19	26	20	25	8	26	24	21	21	8	24	22	26	20
Rd.Main.	8	23	27	19	23	9	28	22	26	15	6	22	25	22	25
Rd.Const.	9	22	26	20	23	9	27	23	20	21	6	24	23	28	19
Schools	10	26	28	24	12	7	26	25	19	23	10	18	17	27	28
Library	8	25	26	23	18	8	25	26	20	21	10	18	33	25	16
Zoning	9	29	24	18	20	8	22	25	25	20	6	22	12	26	34
Elderly	10	22	24	19	25	8	29	23	22	18	.007	11	12	13	63.003
Parks	8	24	23	22	23	8	26	25	21	21	9	25	23	23	20
ATV Laws	8	23	30	20	19	7	23	29	21	20	14	24	17	22	23

AREA	Privately Owned 1	2	3	4	*Not
	(%)	(%)	(%)	(%)	(%)
Sewer	2	29	34	18	17
Water	2	30	35	16	17

*Exact location (by area) was not designated on survey.

11. Conservation and Cultural:

AREA	YES 1 (%)	YES 2 (%)	YES 3 (%)	YES 4 (%)	YES *Not (%)	NO 1 (%)	NO 2 (%)	NO 3 (%)	NO 4 (%)	NO *Not (%)
Scenic Areas	7	24	26	21	22	7	24	24	22	23
Sens. Wetlands	8	29	31	24	8	8	23	23	24	22
Farmlands	8	25	24	21	22	6	25	27	21	21
Historical Sites	7	24	26	22	21	8	26	23	21	22
Cultural Resources	7	24	27	22	20	10	25	23	22	20
Environmental Codes	7	24	25	21	23	7	20	23	24	26
12. Do you favor:										
Neighborhood Stores	8	23	25	21	23	6	27	27	21	19
Zoning/Child Care	6	24	24	21	25	9	25	27	20	19
13. Town Center	7	24	28	19	22	7	24	24	23	22
14. Post Office adequate?	7	23	27	22	21	9	22	23	19	27
15. Income Tax?	7	23	31	20	19	8	21	23	22	26
Sales Tax?	8	25	26	20	21	8	22	21	21	28

AREA	1 (%)	2 (%)	3 (%)	4 (%)	*Not (%)
Which do you favor:					
RAISING TAXES?	12	21	18	20	29
CUTTING TAXES?	6	21	23	23	27
KEEPING TAXES?	7	24	43	23	3

*Exact location (by area) was not designated on survey.

	(AREA)	1	2	3	4	Not Identified	TOTAL
1. Where do you live?		119	379	424	338	386	1,646
2. Place of Work:	Derry	32	97	96	87	51	363
	Manchester	17	62	64	47		
	Nashua	21	38	50	37		
	Portsmouth	2	5	8	5		
	Boston	12	42	46	35		
	Lowell	10	27	22	23		
	Rte. 128	13	52	60	37	332	1,222
	Lawrence	7	27	39	38		
	Haverhill	1	10	12	4		
	Salem	3	15	22	4		
	Concord	2	1	1	3		
	Bow	0	0	0	0		
	Other	10	23	1	15		
Would you work in Derry?	Yes	70	233	273	197	338	1,1112
	No	16	74	63	51	89	293
3. If not employed, are you:	Retired?	9	20	28	21	28	106
	Part-time?	4	6	7	6	9	32
	Unemployed?	3	3	4	4	6	20
	Other(as housewife, etc.)	1	3	0	0		
4. Is Derry a nice town?	Yes	79	279	317	202	274	1,151
	No	30	79	83	66	75	333
5. Property in Derry -	Own	83	353	377	246	297	1,356
	Rent	33	22	23	46	61	185
6. Second High School?	Yes	27	80	92	72	87	358
	No	75	242	255	221	204	997
Expand present facilities?	Yes	46	131	159	108	168	612
	No	27	104	100	103	136	470
Public High School?	Yes	34	123	138	108	117	520
	No	47	131	141	118	119	556

Housing Construction:

	NOT ALLOW						SEVERE RESTRICTIONS						MILD RESTRICTIONS					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total	1	2	3	4	Not	Total
blic ow Inc.	38	122	130	111	112	513	37	158	178	142	127	642	40	62	60	70	81	313
olic lderly	7	15	11	17	16	66	27	86	109	69	58	349	78	246	268	238	193	1023
b. Mod. ncome	38	112	115	95	93	453	38	136	146	125	397	842	31	93	86	89	84	383
art- ents	50	171	177	137	135	670	33	147	158	135	143	616	31	39	40	45	50	205
wn ouses	45	121	130	117	99	512	33	156	172	129	134	624	29	76	81	71	70	327
ngle amily	2	7	12	10	13	44	16	79	96	67	64	322	89	265	274	244	230	1102
bile omes	38	205	195	143	120	701	38	117	143	121	114	533	32	50	48	57	68	255
plex	23	94	115	84	76	392	29	153	198	135	149	664	51	93	81	101	92	418

Recreation:

	YES						NO					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total
Community Ctrs.	61	184	179	185	188	797	24	86	86	54	66	316
Tennis Courts	31	99	112	65	85	392	34	107	99	102	101	443
Skating Rink	45	108	144	116	123	536	24	97	80	69	74	344
Boat Launch	27	62	82	62	280	513	27	108	96	75	81	387
ATV Trails	25	61	84	90	80	340	43	154	149	109	111	566
Ball Fields	37	136	143	111	138	565	21	72	76	63	69	301
Bike Trails	55	183	189	70	266	763	12	56	44	34	72	218
Access to Big Island Pond	59	167	197	178	181	782	14	60	75	39	39	227

Growth:

	FASTER						SLOWER						SAME					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total	1	2	3	4	Not	Tota
esident.	4	24	6	55	6	95	95	289	337	217	266	1204	17	54	55	92	13	231
ndustry	52	154	162	145	132	645	20	81	79	92	88	360	29	88	85	66	73	341

	YES						NO					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total
ght Industry	102	252	356	292	377	1379	4	20	25	23	31	103
avy Industry	38	104	108	125	91	466	62	213	227	174	185	861
tail Stores	69	185	252	178	130	814	32	179	111	124	57	503
rvice Business	55	154	194	161	124	799	41	165	128	118	67	519
ofessional	41	137	186	139	120	623	53	175	145	149	85	607
tertainment	90	243	260	228	134	955	20	96	89	75	57	337
rking	61	179	193	155	139	727	35	135	139	129	87	525

). Public Services:

	GOOD						FAIR						POOR					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total	1	2	3	4	Not	Total
ewer	44	45	38	84	54	265	21	35	33	33	44	166	4	35	28	21	29	117
ter	48	53	45	111	91	348	22	35	37	45	61	200	4	20	23	24	22	93
lice	80	236	229	194	228	967	22	79	67	62	95	325	4	15	24	15	14	72
re	91	261	286	237	232	1107	13	58	53	41	47	212	1	7	5	4	7	24
.Main.	16	45	38	59	52	210	45	126	126	120	115	532	49	173	203	121	154	700
.Const.	18	47	43	52	45	205	38	119	116	105	97	475	35	119	133	83	117	487
hools	60	197	207	173	157	794	24	76	83	60	78	321	6	13	8	13	14	54
brary	36	102	107	136	50	431	35	102	127	106	96	466	25	96	80	65	77	343
ning	13	32	44	39	48	176	27	82	96	122	35	362	44	130	136	108	119	537
derly	24	61	61	55	46	247	37	76	101	80	103	397	11	42	41	30	67	191
rks	45	101	103	114	97	460	37	127	117	101	118	500	21	75	69	47	28	240
/ Laws	14	34	37	42	25	152	18	61	72	48	48	247	30	108	145	91	87	461

	MORE						SAME						LESS					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total	1	2	3	4	Not	Total
ewer	9	57	44	34	52	196	53	62	55	92	65	327	12	25	18	32	21	108
ater	11	44	42	33	39	169	58	84	64	109	77	392	14	21	16	41	26	118
olice	22	63	103	73	82	343	78	228	200	167	163	836	9	26	25	22	57	139
ire	33	63	86	66	80	328	67	228	212	186	178	871	7	22	20	24	18	91
d.Main.	75	211	242	173	212	913	36	113	89	108	62	408	2	7	8	7	8	32
d.Const.	48	122	145	111	132	558	48	147	123	109	113	540	7	26	25	31	21	110
hools	34	87	96	83	39	339	50	178	167	130	155	680	15	28	26	42	44	155
brary	46	145	153	136	104	584	46	139	141	112	109	547	7	13	24	18	11	73
ning	36	117	97	74	82	406	38	111	123	122	65	497	7	27	15	32	40	121
derly	40	86	93	73	95	387	42	151	117	112	92	514	1	15	16	18	86	136
rks	38	110	105	101	101	455	49	155	148	128	122	602	10	27	25	25	20	107
f Laws	28	83	109	74	68	362	24	84	106	79	76	369	23	41	29	37	38	168
Privately Owned																		
r	11	185	218	113	118	645												
r	10	182	212	94	106	604												

· Conservation and Cultural:

	YES						NO					
	1	2	3	4	Not	Total	1	2	3	4	Not	Total
enic Areas	75	273	293	243	250	1134	25	85	84	76	79	349
ns. Wetlands	75	283	298	237	77	970	24	71	74	75	71	315
rmlands	71	219	204	180	194	868	31	128	136	106	103	504
storical Sites	82	275	299	253	385	1156	21	73	65	57	62	278
ltural Resources	64	231	263	213	203	974	31	80	72	71	66	320
vironmental Codes	106	352	367	306	312	1443	5	15	17	18	19	74
· Do you favor:												
ighborhood Stores	91	277	300	251	274	1193	20	88	89	68	66	331
ing/Child Care	43	160	161	140	174	678	58	154	165	123	119	619
Town Center	47	168	194	134	150	703	52	174	180	172	161	739
Post Office adequate?	83	264	314	250	248	1159	36	87	91	76	101	391
Income Tax?	22	76	104	66	64	332	82	218	242	227	266	1035
Sales Tax?	35	107	112	86	84	424	75	217	206	213	280	991
h do you favor?	RAISING TAXES?						CUTTING TAXES?					
	27	50	43	46	67	233	13	46	49	50	58	216
	KEEPING TAXES?											
	67	228	403	212	28	941						

A BRIEF GUIDE TO DEVELOPING DERRY'S PLANNING INFORMATION SYSTEM

Planning is a coordinated effort towards decision making for the future. A computer information system is a tool. By providing quick and easy access to information, a computer information system can increase the productivity of planning efforts. In so doing, the information system can save time and money in the execution of planning responsibilities.

Having a computer information system does not imply that everything in town planning should be automated. Only those functions in which the use of the computer renders benefits in cost, time, or accuracy should be automated. The computer information system can render these productivity benefits in six end-use areas:

1) Word Processing.
2) Database Management.
3) Routine Mathematical Calculations (spreadsheets).
4) Analysis (providing summary statistics).
5) Geographic Mapping.
6) Simulation and Forecasting (projecting trends).

To realize the productivity gains a computer information system affords for town planning, different information should be compiled in a database management system. This information falls into 8 broad categories:

1) Natural Resources (excluding water).
2) Water.
3) Land Use.
4) Demographics.
5) Housing.
6) Transportation.
7) Tax Information.
8) Utility Considerations.

Clearly, not all of the data we would like to have for planning is easily obtainable - data collection is often a lengthy and expensive process. Even with a high level of commitment to collecting data, it is difficult to avoid accuracy errors. These errors occur in the field (when the data is collected) and upon entering the data onto the computer. Before beginning a data collection program, the benefits that access to the data will yield must be assessed against the costs and tradeoffs of inaccuracies incurred in the effort.

To understand how the end uses of the computer and the data collection efforts can be combined to assist town planning, consider the following example of a computerized land use information system:

A land use information system would include a database of all the acres in each of several land use categories: agricultural, residential, commercial, industrial, etc. The land use database could also include specific physical information about each parcel of land - topographical, hydrological, soils information, etc.

It is useful to think of the various types of information as a series of maps. And, in fact, this is technologically feasible with available computer cartographic equipment. Derry could collect, for example, the following basic data: soils, vegetative cover, topographical data, ownership class, hydrological data. With a digitizer and map plotter (standard computer cartography equipment), one can retrieve the basic data from computer files and produce maps of the town. These maps would show any or all of the land use attributes of interest. One could also 'overlay' different maps to produce new ones. Thus, 'overlaying' the topographical map (or database) onto the hydrological map can indicate areas likely to experience high rates of water runoff during storms. The new map can be called the runoff map, with an overlay of a vegetative cover map superimposed over the newly-created runoff map, one could deduce the degree to which different areas in the town are susceptible to erosion. The number of possible overlays is limited first by the available data and second by our creativity in combining information to tell us more about the land than isolated pieces of information reveal.

With these types of information, we can begin an analysis of the potential for soil erosion given what we know about precipitation patterns in southern New Hampshire. In order to successfully computerize an analysis of erosion potential, we would need to enter two items into the computer: 1) precipitation data, and 2) an analytical model that estimates the interactive effects of precipitation, soil type, slope and vegetative cover. Such models exist and are used regularly by organizations such as the Army Corps. of Engineers. Once this information was supplied, the model could assess, on demand, the potential for erosion on any parcel of interest.

Finally, a simulation model could evaluate current land use information and provide a 'what if' analysis, i.e., What is the erosion potential if a gravel pit is dug on this parcel?; What is the erosion potential if a parking lot is constructed on that parcel? A simulation model will allow one to correctly trace out the implications of these 'what ifs'.

Physical data about the different parcels of land within Derry would be collected from any number of sources: field surveys, aerial photos, Landsat photos, Soil Conservation Service information. Likewise, different town departments would be responsible for transmitting data to the main information database within the computer: the building department would update map and lot information; the assessor's office would update property ownership information; the public works department would enter information pertinent to engineering systems within Derry.

At each step of data processing within the land use information system maps would be produced of the parcels and their attributes. Mapping capability is not absolutely essential, however. Access to the data in tabular or chart form would also increase planning productivity significantly. Maps are a more powerful communication tool than charts or tables; hence, it is advantageous to design the computer information system in such a way as to take advantage of mapping technology.

This example is one of many potential uses of a land use information system. It is meant to stimulate the thinking on how Derry can use their computer and database management system to assist in its planning efforts. The modeling/computer technologies described above are currently in use in other organizations. Thus, the land use information system description is firmly grounded in a vision of a planning information system that is thoroughly attainable by a town the size of Derry.

Fred Tompkins
Brookview Drive
Derry, N.H. 03038

October 28, 1986

To: Members - Derry Planning Board

Subj: Estimated Derry population - 1986

Attached is an estimate of the 1986 population using some easy to find data. The method used was to estimate the change in population of adults, elementary school children, and pre-school children from the prior census year.

I found that a reasonably accurate estimate of the 1980 population could be made using the 1970 census and estimating the population change using:

Change in resident tax count based on the original warrant.

Change in public elementary school population.

Change in births in five years including the target year.

Using the same methodology, the 1986 population would be estimated as 25,656.

I note that the New Hampshire Office of State Planning has issued revised population forecasts for Derry:

1985	-	23,750
1990	-	29,540
2000	-	35,720

I believe that the current population estimates used in the Master Plan and the future population estimates, that are based on the current population estimates, should be adjusted to reflect a more realistic current population estimate.

Fred Tompkins

1986 Population Estimate Derry, N.H.

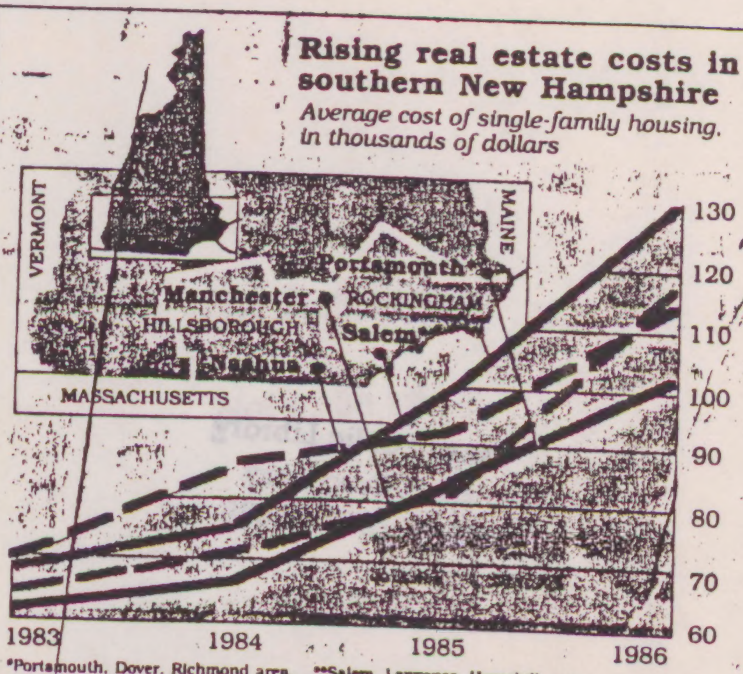
	Resident Taxes	R to 8 School Children	Births 5 Years		
1980 Estimate					
1980	10,763	2,390	1,723		
1970	4,251	2,040	1,208		
Change	6,512	350	515	7,377	
1970 Census				11,712	
Estimated 1980 population				19,089	
1980 Census				18,875	
Error compared to census				214	1.13%
1986 Estimate					
1986	16,725	2,731	2,201		
1980	10,763	2,390	1,723		
	5,962	341	478	6,781	
1980 Census				18,875	
Estimated 1986 Population				25,656	

Notes:

1. Resident tax count based on original warrant.
2. R-8 School children ignores special ed students 1980,1986
3. 5 year births based on reported births including the target year.

Rising real estate costs in southern New Hampshire

Average cost of single-family housing, in thousands of dollars



*Portsmouth, Dover, Richmond area. **Salem, Lawrence, Haverhill area.
Source: The New Hampshire Housing Finance Authority.

Actual growth and projected growth

Ten fastest-growing communities in Hillsborough and Rockingham counties

City	1970	1980	1985	1990	2000
Bedford	5,859	9,481	11,600	12,990	14,450
Derry	11,712	18,875	23,750	29,540	35,720
Goffstown	9,284	11,315	13,670	15,100	17,410
Hudson	10,638	14,022	16,820	18,870	21,460
Londonderry	5,346	13,598	16,160	19,230	24,780
Manchester	87,754	90,936	96,000	98,660	103,480
Merrimack	8,595	15,406	18,000	19,790	23,420
Nashua	55,820	67,865	76,000	83,690	96,540
Newmarket	798	4,290	5,280	5,870	6,890
Raymond	3,003	5,453	6,700	7,400	9,600

Source: New Hampshire Office of State Planning.

Globe staff graphic